DOCUMENT RESUME

ED 143 168 EC 101 557

AUTHOR	Vodola, Thomas M.
TITLE	Developmental Physical Education--Low Motor Ability: An Individualized Program for Enhancing Motor and Perceptual Motor Performance. Second Edition.
INSTITUTION	Ocean Township Board of Education, Oakhurst, N.J.
SPONS AGENCY	Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C.
REPORT NO	72-341
PUB DATE	76
NOTE	203p.; The document is one of the "Developmental and Adapted Physical Education" series; For related information see, EC 101 552-561; Some parts may reproduce poorly
AVAILABLE FROM	Township of Ocean School District, Dow Avenue, Oakhurst, New Jersey 07755 ($6.00)
EDRS PRICE	MF-$0.83 HC-$11.37 Plus Postage.
DESCRIPTORS	*Adapted Physical Education; *Diagnostic Teaching; Elementary Secondary Education; *Individualized Programs; *Learning Disabilities; *Mentally Handicapped; Motor Development; *Perceptual Motor Learning; Preschool Education; Student Evaluation; Teaching Guides
IDENTIFIERS	*Project ACTIVE

ABSTRACT

As one of the components of the Project ACTIVE (All Children Totally Involved Exercising) Teacher Training Model Kit, the manual is designed to enable the educator to organize, conduct, and evaluate individualized-personalized physical education programs for prekindergarter through secondary level mentally retarded or learning disabled children. Covered in an introductory chapter are the rationale for motor/perceptual-motor programing definitions, and student and teacher behavioral objectives. Provided in Chapter II are eight instruments for diagnosing the developmental needs of children so that motor and perceptual-motor activities can be individually prescribed. A systematic procedure for assessing student progress efficiently is explained in Chapter III. Chapter IV shows the interrelationship between the diagnostic and prescriptive processes. Chapter V focuses on evaluation of student progress at the end of a specific block of time so that a decision can be made regarding subsequent programing. Tasks and activities are described in Chapter VI which provide a cluster of student learning experiences that will enhance the factors (such as gross body coordination) listed in the motor ability test and perceptual motor screening instrument. Appendixes include flow charts and checklists, a list of supply and equipment needs, characteristics of students who need perceptual-motor training, and guidelines for establishing a summer program. (SBH)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

ED14316

Township of Ocean School District
Dow Avenue
Oakhurst, New Jersey 07755

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

DEVELOPMENTAL PHYSICAL EDUCATION.. LOW MOTOR ABILITY

AN INDIVIDUALIZED PROGRAM FOR ENHANCING MOTOR AND PERCEPTUAL MOTOR PERFORMANCE

Thomas M. Vodola, Ed.D.
Project Director

Project Active: All Children Totally InVolved Exercising

Project Number: 72-341, Title III-IVC, E.S.E.A.

MEMO FROM THE COMMISSIONER
"On behalf of the Department of Education, State of New Jersey, I wish to bring Project ACTIVE to the attention of educators throughout the nation. The program has made a significant contribution to both physical and special education in New Jersey and thus will be of interest to both educators and parents."

Fred G Burke

Dr. Fred G. Burke
Commissioner of Education
New Jersey Department of Education

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Thomas M. Vodola
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND THE ERIC SYSTEM CONTRACTORS."

EC 101 5[illegible]7

BOARD OF EDUCATION

Mr. Mark Abrams, President
Dr. Carney A. Vetrano, Vice President
Mr. Frank R. Beardsley
Mr. Nicholas Donofrio, Jr.
Mr. James A. Filippo
Mr. James F. Jeffries
Dr. Harry G. Kacandes
Mr. Stephen Morse
Dr. Joel Shappirio

TOWNSHIP OF OCEAN SCHOOL DISTRICT
1976

SUPERINTENDENT AND STAFF

Mr. Robert J. Mahon
Superintendent of Schools

Mr. Marshall D. Conklin
Business Administrator

CENTRAL ADMINISTRATION

Mr. Charles Grippaldi
Mr. James Hartnett
Thomas M. Vodola, Ed.D.

D&A COUNCIL

Miss Elizabeth Brown
Mr. Anthony Covino
Miss Cecilia D'Agostin
Mrs. Ruth Dallam, R.N.
Mrs. Pam Galatro
Mr. Jerry Hauselt
Helen Jones, M.D.
Mrs. Helen Liebhardt, R.N.
John Malta, D.O.
Mrs. Mary McSpadden
Mr. Glenn W. Morgan
Miss Carol Morse
Mr. Thomas Pagano
Mr. Joseph Palaia
Enrique Pardon, M.D.F.A.C.S.
Mr. John Rasp
Mrs. Joanne Ridley, R.N.
Mr. Frank Rizzi
Mrs. Edith Schmidt, R.N.
Mrs. Carolyn J. Terhune
Mrs. Barbara Thompson
Mrs. Camille Tighe
Mr. Jack Tighe
Mr. Donald V[illegible]burg
Mr. Fred West
Mrs. Helen Young
Thomas M. Vodola, Ed.D.
Mrs. Wanda Young, R.N.
Mrs. Aileen Marino

First Printing – September 1974
Second Edition – April, 1976

PARTICIPATING SCHOOL DISTRICTS/AGENCIES
NEW JERSEY

COUNTY	SCHOOL
Atlantic	Winchell Orthopedic
	Assoc. for Children with Learning Disabilities (ACLD)
Bergen	Dumont
	Paramus
Burlington	New Lisbon State
	Willingboro
Camden	Bellmawr
Cape May	Lower Township
	Ocean City
	Association for Children with Learning Disabilities
Essex	Glen Ridge
	Livingston
	Orange
	Montclair State College
Gloucester	Gloucester County College
Hudson	Jersey City
	St. Joseph's School for the Blind
	Bayonne Parks & Recreation
Hunterdon	Hunterdon Central Regional
	Lebanon
	North Hunterdon Regional

COUNTY	SCHOOL
Mercer	East Windsor Regional
Middlesex	Carteret
	Madison Township
	Woodbridge State
Monmouth	Township of Ocean
	Asbury Park
	Red Bank
	Wall Township
	Monmouth College
	Association for Children with Learning Disabilities
	Association for Retarded Children
Morris	Madison
	Morris Hills
Ocean	Long Beach Island
Passaic	Wayne
	Bonnie Brae School for Boys
	Eastern Christian Children's Retreat
Sussex	Newton
Union	Cranford
	Kean College, Institute of Child Study

OUT-OF-STATE

STATE	CITY	SCHOOL
Iowa	Bettendorf	Grant Wood School
	Maquoketa	Briggs School
	Sioux City	Pupil Services Center
	Vinton	Iowa Braille & Sight-Saving
Minnesota	Slayton	West Elementary
Nebraska	Alliance	Educational Svc. Unit No. 12
	Bellevue	CHAP
	Bellevue	Central Elementary
	Emerson	Emerson-Hubbard
	Holdrege	New View
	Omaha	Montclair
	Shelby	Shelby
New Mexico	Lordsburg	Yucca Center
	Deming	LCRC
	Deming	El Paisano
	Fort Bayard	Native Plant Nursery
	Fort Bayard	Ocotillo Preschool
	Silver City	Quemado
	Reserve	Catron County
	Silver City	S.W.S.H.
	Silver City	Grant County Recreation Ctr.

Copyright, Township of Ocean School District, Oakhurst, New Jersey, 1976.
Copyright will be claimed only during the period of further development unless copyright of the final materials is authorized by the New Jersey State Department of Education.

PREFACE

The development of the Project ACTIVE manual, *Developmental Physical Education: Low Motor Ability* was a cooperative effort of the Township of Ocean School District and the Office of Program Development, Division of Research, Planning, and Evaluation/Field Services, Department of Education, State of New Jersey.

In 1974 the Project ACTIVE manual, *Developmental Physical Education Low Motor Ability* was validated by the standards and guidelines of the United States Office of Education as successful, cost-effective, and exportable. As a result the program is now funded through the New Jersey Elementary and Secondary Education Act, Title III-IVC program to offer interested educators the training and materials required for its replication. This manual was prepared as part of the program's dissemination effort.

The purpose of Title III is to encourage the development and dissemination of innovative programs which offer imaginative solutions to educational problems. Project ACTIVE has achieved this purpose by disseminating its innovative program to 500 teachers and paraprofessionals through 24 regional workshops. Further, as of June 1975, 76 school districts and agencies in the State of New Jersey have adopted or adapted some aspect of the individualized physical education program in accordance with the educational needs of their districts – involving more than 10,000 individuals.

This manual has been prepared as one of the components of the Project ACTIVE Teacher Training Model Kit. Other component parts of the Model Kit which are available to those interested in adopting or adapting the project's individualized instructional concept are cited below.

- Developmental Physical Education:[1] Low Physical Vitality
- Adapted Physical Education: Postural Abnormalities
- Adapted Physical Education: Nutritional Deficiencies
- Adapted Physical Education: Communications Disorders
- Adapted Physical Education: Motor Disabilities or Limitations
- Adapted Physical Education: Breathing Problems
- Developmental and Adapted Physical Education: A Competency-Based Teacher Training Manual
- Teacher Training Filmstrip: A Competency-Based Approach
- Motor Ability Filmstrip: An Individualized-Personalized Approach

These products have been validated for national dissemination and may be purchased from the project director.

Districts interested in establishing individualized physical education programs for the handicapped need assistance. The following dissemination-diffusion services are provided to aid implementing schools during the initial phases of program installation:

- Inservice training programs
- Certificates of merit for pupil achievement and/or improvement
- Monthly issue of the ACTIVE Newsletter
- Test instruments to assess pupil performance
- Development of school norms
- Other general consultant services

For additional information regarding the model kit, other awareness materials, or available services, the reader is requested to contact:

Dr. Thomas M. Vodola, Director
Project ACTIVE
Township of Ocean School District
Dow Avenue
Oakhurst, New Jersey 07755

---

[1] Developmental Physical Education is defined as that aspect of the physical education program which addresses itself to the provision of enrichment of physical activities for those students who are below normal in terms of physical fitness, motor performance, and/or perceptual-motor performance.

ACKNOWLEDGEMENTS

The manual, Developmental Physical Education: Low Motor Ability is based on the Developmental and Adapted (D&A) Program developed by the Project Director in the Township of Ocean School District, Oakhurst, N.J.

Appreciation is expressed to the Township of Ocean Board of Education, Superintendent of Schools, the D&A Council, teachers, students, and parents for their total commitment to the program. Special appreciation is accorded to the Township of Ocean Physical Education Department for their unstinting support and effort.

To Prentice-Hall, Inc., a special vote of thanks for granting the Project Director permission to include materials from his text, *Individualized Physical Education Program for the Handicapped Child.*

Sincere appreciation is also accorded to the Advisory Council members who assisted in the reviewing and editing process: Mr. Sal Abitanta, Consultant, New Jersey State Department of Education; Dr. David Bilowit, Professor, Kean College of New Jersey; Mrs. Edwina M. Crystal, School Psychologist, Township of Ocean School District; Mr. Al Daniel, Coordinator, Developmental Physical Education, Cherry Hill School District; Dr. George Gerstle, Assistant Professor, Glassboro State College; Mr. Paul Porado, Program Director, Office of Special Services, N.J. Department of Education; and Dr. Marion Rogers,* Professor, Glassboro State College. Also special thanks to the project consultants: Miles Drake, M.D. representative of the New Jersey Chapter of the American Academy of Pediatrics; Dr. Raymond Weiss, Professor, Department of Health, Physical Education and Recreation, New York University; and Dr. Julian U. Stein, Director, Program for the Handicapped, American Association of Health, Physical Education and Recreation, Washington, D.C.

To Mrs. Jean Harmer, Mrs. Mary Kesperis, Mrs. Dorothy Smith and Mrs. Ellen Kearney, gratitude and appreciation for their painstaking devotion to the development of the intermediate "product."

Grateful appreciation is expressed to the New Jersey State Department of Education and the Title III-IVC staff members for their continued assistance and support. To Dr. Lillian White-Stevens, a deep debt of gratitude for her editing expertise.

Special thanks are extended to the Project ACTIVE cadre team, for the many hours they devoted to assisting in the restructuring of the "final" product. The synthesizing team consisted of: Mrs. F. June Graf, Livingston School District; Mr. Robert Fraser, Wayne Township Public Schools; Mr. Robert Ekblom, Madison Township Public Schools; Mr. Thomas Cicalese, Morris Hills Regional District; Mr. Tim Sullivan, Montclair State College; Mr. G. "Buzz" Buzzelli, Monmouth College; Mr. Roy Lipoti, New Lisbon State School, Garden State School District; Mr. Edward Korzun, Orange Public School System; Mr. Thomas Pagano, Township of Ocean School District; Mr. Lawrence A. Guarino, Newark School District; Mr. Al Daniel, Cherry Hill School District; and Dr. David Bilowit, Kean College of New Jersey. Credit for the art work is accorded to Mr. Athan Anest, Wall Township School District.

To the many authors and publishers who permitted the use of their materials in the manual, I express my sincere appreciation.

Finally, to Emil Praksta,** a representative of the South Jersey Educational Improvement Center, the co-director of this project and a personal friend, my sincere appreciation for his constant stimulation, support, and criticism of all materials.

A final note: Although the aforementioned "team" made many constructive suggestions which were included in the manual, I accept full responsibility for the final product and any criticisms thereof, because all final decisions were a reflection of my personal philosophy.

Thomas M. Vodola, Ed.D.
Title III-IVC, Project Director

---

*Retired as of July, 1973
**Recently deceased

TABLE OF CONTENTS

Page

PREFACE iii
ACKNOWLEDGEMENTS iv

CHAPTER

I. INTRODUCTION 1
  Overview 1
  Rationale for Motor and Perceptual-Motor Programming 2
  Definitions 4
  Student Behavioral Objectives 4
  Teacher Behavioral Objectives 5
II. TEST PROCEDURES 7
  Prekindergarten Motor Ability Screening Instruments 8
    Prekindergarten Screening Test 8
    Basic Motor Pattern Checklist: Group Screening 10
    Basic Motor Pattern Checklist: Individual Screening 10
  Motor Ability Screening Instruments 16
    Basic Motor Ability Screening Test 16
    Basic Movement Performance Profile 24
    Motor Ability Test, Ages 5-7 31
    Motor Ability Test, Ages 8-11 37
  Perceptual Motor Screening Instrument 38
III. ASSESSMENT PROCEDURES 43
  Objective Appraisal, Motor Performance 45
  Subjective Appraisal, Motor and Perceptual-Motor Performance 47
IV. PRESCRIPTION PROCEDURES 51
  Identification of Priority Needs 51
  Task Analysis 57
  Perceptual-Motor (PM) Prescription Considerations 62
  Program Implementation 64
V. EVALUATION PROCEDURES 71
  Suggested Evaluative Guidelines 71
  Pupil Progress Report to Parents 74
  Summary of the TAPE Process 76
VI. RESOURCE TASKS AND ACTIVITIES 77
  Motor Ability Factors 77
    Gross Body Coordination 77
    Balance and Postural Orientation 82
    Eye–Hand Coordination 89
    Eye–Hand Accuracy 95
    Eye–Foot Accuracy 99
  Perceptual-Motor Factors 102
    Visuo-motor Activities 102
    Audio-motor Activities 104
    Complex Perceptual-Motor Activities 107

TABLE OF CONTENTS (Continued)

Page

APPENDICES 110

A Motor Ability Flow Chart 110
Motor Ability Activity Checklist 111
Perceptual-Motor Flow Chart 115
Perceptual-Motor Activity Checklist 116
B Student Certificate of Merit 121
C Teacher Certificate of Achievement 122
D Supply and Equipment Needs for Program Implementation 123
E Basic Motor Ability Test: Composite Score Sheet 128
F Basic Movement Performance Profile 129
G Tapered Balance Beam Specifications 130
H Motor Ability Test, Ages 8-11: Composite Score Sheet 131
I Motor Ability Norms, Ages 5-7 132
J Tables of Numbers 135
K Characteristics of Students who need Perceptual-Motor Training 146
L Answers for Problems Cited in Teacher Learning Experience 148
M Motor Ability Test, Class Record Sheet 152
N Guidelines for Establishing a Summer Program 153
O Directions for Submitting Time Prescriptions 155
P Motor Ability Norms, Ages 8-11 159

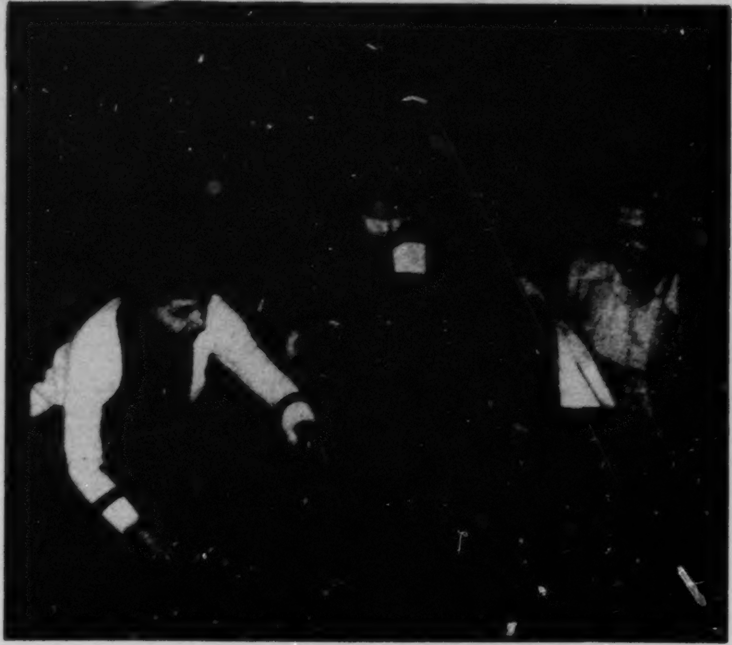
BIBLIOGRAPHY 163

INDEX 165

TABLES

2-1 Prekindergarten Screening 9
2-2 Basic Motor Pattern Checklist 11
2-3 Basic Motor Ability Test Form 23
2-4 Basic Movement Performance Profile: Individual 30
2-5 Motor Ability Test, Ages 5-7 36
2-6 Motor Ability Test, Ages 8-11 39
2-7 Perceptual Motor Screening Instrument 42
3-1 Kindergarten Motor Ability Test Norms 46
3-2 Physical Fitness and Motor Ability Progress Profile 48
3-3 Ages of Success and Basic Patterns for Motor Tasks 49
4-1 Motor Ability Time Prescription Chart: An Example 53
4-2 Motor Ability Profile Chart 56
4-3 Motor Ability Time Prescription Chart 57
4-4 Equipment Classified Index 58
4-5 Individual Participation Card 70

INTRODUCTION



CHAPTER ONE

INTRODUCTION

OVERVIEW

Developmental Physical Education: Low Motor Ability has been developed to serve three purposes:[1]

1. Provide a manual for training physical educators, special educators, and recreation teachers so they can achieve the minimal competencies necessary to implement an individualized motor and perceptual-motor activity program for students from pre-kindergarten through grade 12.
2. Provide practitioners in the field with a structured procedure for individualizing an instructional motor activity program for students who exhibit deficiencies in gross body coordination, balance-postural orientation, eye-hand coordination, eye-hand accuracy, and eye-foot accuracy.
3. Provide practitioners in the field with a structured procedure for individualizing a perceptual-motor program for students who display deficiencies in integrating perceptual and motor skills.

The diagnostic prescriptive procedure includes:

a. Review of all pertinent information related to the learner
   - cumulative records
   - medical records
   - conference with special services personnel
   - parent and student conference

b. Testing the learner on a formal and informal basis
   - administration of the Township of Ocean Motor Ability Test – norm-referenced standards which provide summative information
   - administration of criterion-referenced tests – formative information provided on a daily basis

c. Assessing the learner's performance on the basis of:
   - background information
   - test results
   - informal observation

d. Prescribing tasks and activities in accordance with:
   - the strengths and weaknesses of the learner
   - his or her most appropriate learning style
   - sound strategies for the enhancement of the child's self-concept, e.g., opportunity to select activities of interest

e. Evaluating the learner's performance at nine-week intervals

The program presented has been validated according to the standards and guidelines of the United States Office of Education as innovative, successful, cost-effective, and exportable. The program's success was assessed through three separate research studies in which subjects were matched according to age, sex, pre-test motor ability scores, and handicapping conditions.[2] Statistical comparisons revealed that the pupils who were provided motor activity programs commensurate with their strengths and weaknesses made gain scores significantly superior to those who were provided traditional physical education programs (non-individualized games and activities) and/or classroom activities.

The manual has been structured to provide the reader with a sequential approach to initiating an individualized motor and perceptual-motor activity program. The remaining sections of Chapter One deal with a rationale for motor and perceptual-motor programming, definitions, and student behavioral objectives. Subsequent chapters detail the individualized process via the acronym T.A.P.E. test, assess, prescribe, and evaluate.[3] A detailed description of the step-by-step procedures necessary for program implementation is presented in the flow chart and activity checklist in Appendix A.

---

[1] **Note**: Prior to admission into the Developmental Physical Education Program, the mentally retarded or learning disabled student must have a medical release signed by the family-school physician, the Child Study Team, or the school psychologist if there is no "Team." (The Child Study Team consisting of a psychologist, social worker, learning disability specialist, nurse, physician and coordinator, legally "classify" children in the state of New Jersey.) Further, the "Team" should either provide the prescriptive tasks, or approve the physical educator's recommendations.

[2] Included in the studies were pupils who were classified as evidencing low motor ability, mental retardation (educable) neuorological impairment, perceptual impairment, and emotional disturbances.

[3] Frank Hayden, *Physical Fitness for the Mentally Retarded,* p.9.

RATIONALE FOR MOTOR/PERCEPTUAL-MOTOR PROGRAMMING

During the past several years, the Project Director has conducted many lectures and workshops throughout the state of New Jersey. Invariably, during the discussion phase of each program, the same questions have been raised. In response to the questions, the writer developed an article which would provide subsequent audiences with an overview of: the need for physical activity programming; procedures for identifying those children in need of an enrichment program; criteria for selecting motor ability skills; and activities that can be used by the special education teacher. This article is herewith presented in its entirety.

"THE REMEDIATION OF MOTOR AND RELATED SKILLS IN MENTALLY RETARDED/LEARNING-DISABLED CHILDREN"[1]

Question:
Why do we bother with such skills as gross and fine motor coordination when teaching the learning-disabled child?

Theory and Research Rationale for Motor Activity Programming

1. Newell C. Kephart and other developmental theorists contend that this is a sequential learning continuum as indicated in the illustration below.

Motor	Perceptualization	Perceptual-Motor Integration	Conceptualization

   The contention of the developmental theorists is that a weak foundation of motor patterning responses enhances the likelihood of the manifestation of deficits in subsequent skills.
2. Motor performance of the learning-disabled may be 2-4 years behind the performance of the normal child.
3. Physical fitness studies indicate there is a high, positive, correlation between one's physical prowess and self-concept.
4. Enhanced motor performance has a positive effect on a child's self-concept.
5. Structured physical-motor activities can better prepare a child for vocational pursuits. For example, postal workers are tested in terms of the ability to lift 30 lbs. with either arm and in terms of eye-hand coordination.
6. Perceptual-motor tasks aid in the development of readiness skills for academic learning.
7. Some research studies reveal benefits from motor performance for the hyperactive or distractible child.
8. Abstract academic concepts can be made more concrete via movement experiences. (See Fig. 1-1.)

Fig. 1-1 Perceptual-Motor Matching
(Training Program, Silver City, New Mexico)

Research No No's

1. Motor performance, per se, does not contribute to improved academic achievement. For example, walking on a balance beam will contribute to the development of one skill — walking on a balance beam.
2. Mixed dominance is not necessarily an indicator of poor academic achievement.
3. Poor motor performance is not necessarily an indicator of poor academic achievement.

Question:
How do you determine which children might profit most from some type of adapted physical education?

Determination of those Students who will Benefit from an Enrichment Program

There is no simplistic procedure for determining whether a child should be placed in an unrestricted, or an adapted, physical education class. The decision must be made on the basis of what is best for the child. A prime criterion should be whether he can achieve *educationally* in the unrestricted program. The decision should be based on a review of the Child Study Team Report and on input information from the special educator, the Learning Disability Teacher Consultant, and the physical educator. One "rule-of-thumb" to remember is, wherever possible, the child should be kept in the unrestricted program and provided enrichment activities via additional classes in adapted physical education.

---

[1] Expansion of a lecture presented at the Holmdel Public School, Holmdel Township, New Jersey, February 12, 1974.

Question:
Are there diagnostic tests, or observation forms for the identification of those children who will benefit from an enrichment program?

Availability of Diagnostic or Observational Forms

If the "team" decision has been made to schedule a child in adapted physical education, the physical educator should be prepared to assess comprehensively the child's physical and motor capabilities. Such testing should be the determining factor as to whether the child remains in the adapted class, or is referred back for placement in the unrestricted program. Thus, the physical educator should have available a motor ability test, a physical fitness test and district-wide norms.

Many available diagnostic instruments may be used for identifying those children who would benefit from an enrichment program: The Perceptual Survey Rating Scale,[1] The Winterhaven Perceptual Testing Guide,[2] The Pennsylvania Movement Pattern Checklist,[3] The Pathway Program,[4] The Denver Developmental Screening Test,[5] Audio-Visuo Motor Training,[6] The Motor-Development Scale for Moderately & Severely Retarded Children,[7] and Visual Perceptual Training.[8]

The Township of Ocean School District has developed their own Motor Ability and Physical Fitness Tests with district-wide norms and specific cut-off scores for scheduling or releasing students from the program. These instruments are practical in terms of administration time.

a. Assessing Pupil Performance b. Preparing Prescriptive Program

Fig. 1-2 Diagnostic-Prescriptive Process
(Turn-key Training Program, Township of Ocean School District, Oakhurst, N.J.)

Whatever diagnostic tool is selected, consideration must be given to the collection of "process" information as well as "product" information; the individualization of instruction necessitates that major emphasis be placed on the first evaluative technique. For example, recording a child's scores on a test battery (product information) informs us as to what he can and cannot perform, but gives little insight as to "why" he cannot perform certain items. Clues as to "why" the child cannot perform a task can be obtained only by careful observation during the performance of the task. Thus, teacher anecdotal remarks (process information) are critical to the diagnostic and prescriptive process.

Question:
What factors should be considered when selecting motor tasks and activities for the learning-disabled child?

Motor Task and Activity Criteria

1. Concentrate on providing a broad, experiential foundation of motor patterns rather than discrete motor skills.
2. Utilize activities as a "means to an end" rather than as an "end product." Before incorporating an activity in a child's prescription you should say to yourself, "Will this activity meet a specific need of the child?" For example, is there an educational justification for all children in a class to walk on a balance beam?
3. Design individual prescriptions to insure that each child achieves success, by structuring all skills from the simple to the complex.
4. Provide learning experiences based on the child's *strengths* as well as weaknesses. (Such experiences will motivate the child and thus achievement will be enhanced.)

---

[1] Newell C. Kephart, *The Slow Learner in the Classroom.*

[2] Genevieve I. Curry, *Winterhaven's Perceptual and Training Handbook.*

[3] John H. Doolittle, *Challenge to Change.*

[4] Gerald N. Getman, *Pathway Program 1.*

[5] William K. Frankenburg & Josiah B. Dodds, *Denver Developmental Screening Test.*

[6] Edith Klasen, *Audio-Visuo Motor Training with Pattern Cards.*

[7] H.D. Bud Fredericks et al., *The Teaching Research Motor Development Scale for Moderately and Severely Retarded Children.*

[8] Susanne A. Cunningham and Cora Lee Reagan, *Handbook of Visual Perceptual Training.*

5. Repetition-repetition-repetition. Experiences must be replicated many times before internalization takes place.
6. Teach skills through demonstration; minimize verbalization. Assist the child through the movement pattern since his inability to integrate discrete tasks is a major problem.

DEFINITIONS

This manual addresses itself to providing an individualized-personalized motor and perceptual-motor program for children evidencing mental retardation and learning disabilities. Thus, it is advisable to define all of the variables discussed, prior to dealing with program implementation.

Mental Retardation

The American Association on Mental Deficiency (AAMD) defines the term as follows, "Mental retardation refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior."[1]

Learning Disability

The learning disabled child is one "who has specific difficulty in one or more basic learning processes but who apparently has normal or near-normal intelligence."[2]

Low Motor Ability

Low motor ability is defined as a deficiency in gross body coordination, balance and postural orientation, eye-hand coordination, eye-hand accuracy, and eye-foot accuracy, or a composite deficiency thereof.

Perceptual-motor Problems

These are defined as the inability to simultaneously integrate two or more "information systems," one of which is a motor response. The process involves the matching of one or more sensory input systems (visual, auditory, etc.) with a motor act which results in the learner being required to make a decision.[3]

Individualized Instruction

Diagnosis and prescription are the basic ingredients necessary for the provision of individualized instruction (II). The strategies involved include: formal and informal testing; formative and summative assessment; prescription; and evaluation.

Personalized Instruction

Personalized instruction deals with the humanistic aspects of the teaching-learning process. Primary consideration is devoted to the development of teacher-pupil and pupil-pupil rapport and to the enhancement of the child's self-concept.

STUDENT BEHAVIORAL OBJECTIVES[4]

The Student:

1. Attains a minimum average standard score of 50 on the Township of Ocean Motor Ability Test Battery, with no single component stanine score of less than 4, for grades K-2.
2. The mentally retarded or learning disabled attains a minimum average standard score of 40, or a single component score of 3 on the Township of Ocean Motor Ability Test Battery.
3. Performs his prescribed motor task correctly (grades K-2, or children with motor problems, regardless of gradel level).
4. Demonstrates the ability to integrate the following perceptual-motor responses: auditory-motor; visuo-motor; and audio-visuo-motor. In each situation the child must make a correct decision.
5. Demonstrates proficiency in two new recreational activities. Evaluative criteria: pre- and post-test inventory of recreational pursuits are assessed by the teacher.
6. Demonstrates increased ability to order tasks sequentially. Evaluative criteria: pre- and post-test of tasks that require serial ordering.
7. Manifests an increased "attention-span." Evaluative criteria: pre- and post-time test working on a pegboard design (student performance is assessed by the teacher).
8. Manifests a gain in self-concept. (Student performance is assessed by the teacher.)

Fig. 1-3 Visuo-Motor Integration
(Atlantic County N.J.A.C.L.D. Summer Program, Summer 1975)

---

[1] Jean M. Moran and Leonard H. Kalakian, *Movement Experiences for the Mentally Retarded or Emotionally Disturbed Child,* p.7.

[2] Patricia I. Myers and Donald D. Hammill, *Methods for Learning Disorders,* p.7.

[3] G.N. Getman, O.D., "Perceptual-Motor Programming."

[4] Students who attain minimal performance levels will be awarded Certificates of Merit from the ACTIVE Office. Refer to Appendix B for a sample of the certificate.

TEACHER BEHAVIORAL OBJECTIVES[1]

The teacher:

1. Converts raw data to percentile scores via tables of numbers. Evaluative criteria: directions and tables of numbers provided in class.
2. Converts percentiles to stanine scores via use of a stanine conversion chart. Evaluative criteria: conversion chart provided in class.
3. Computes time prescriptions for a test battery: stanine scores are provided. Evaluative criteria: computational formula provided in class.
4. Identifies the primary and secondary somatotyping characteristics of a subject. Evaluative criteria: material distributed in class.
5. Administers the battery of motor ability instruments. Evaluative criteria: test directions provided in class.
6. Names, demonstrates and teaches a task or activity that will ameliorate, or eliminate each of the following motor performance problems; gross body coordination; gross body balance; eye-hand coordination; eye-hand accuracy; and eye-foot accuracy. Evaluative criteria: tasks and activities based on review of literature.
7. Designs and alternate test battery that meets the following criteria: test item for each factor in No. 6 above; test item with reliability coefficients of .75 or better; and supply and equipment items that are available in the physical education or recreation department. Evaluative criteria: source documentation.

a. Trainee Practicum Experience

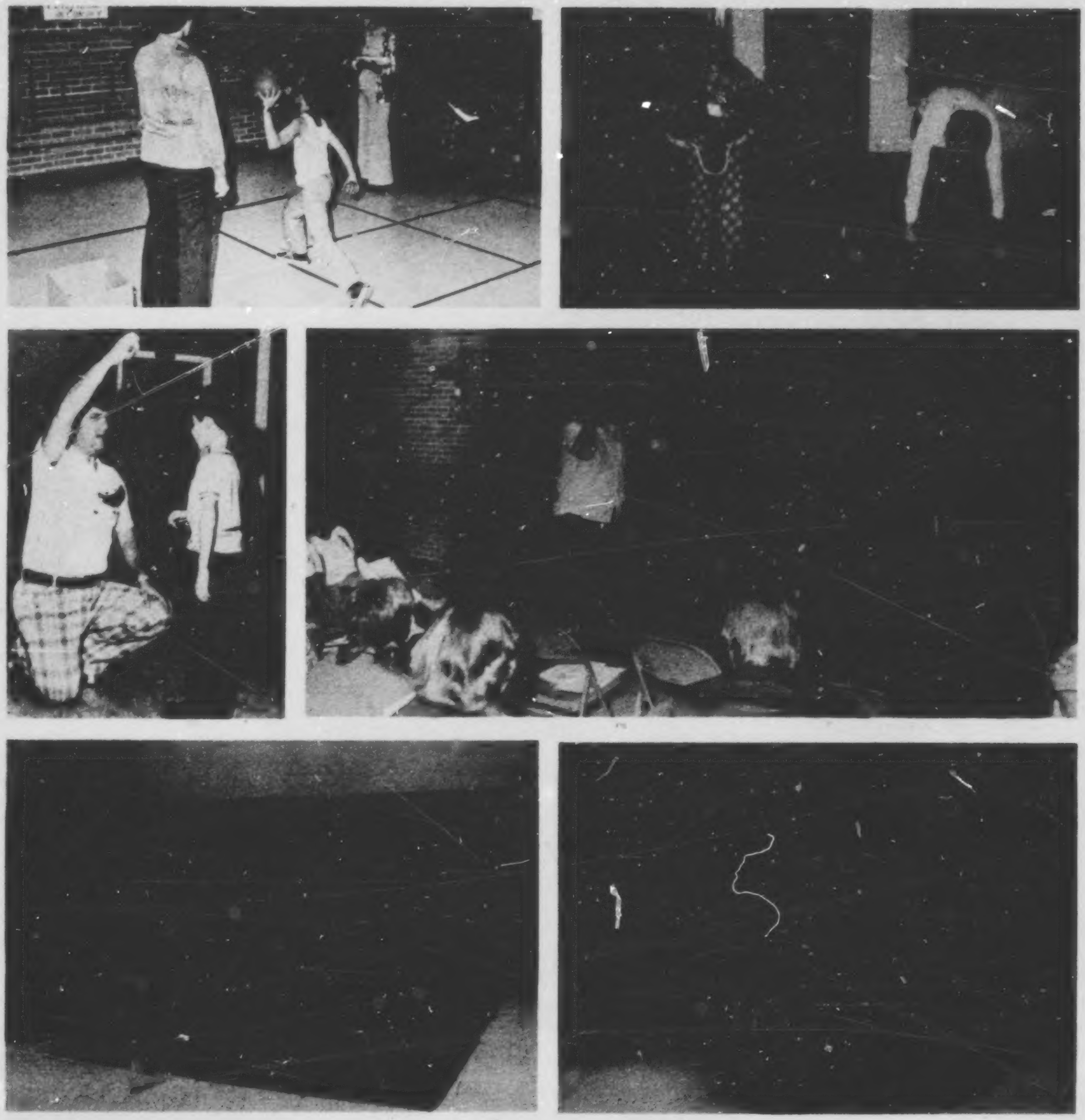
b. Trainer-Trainee Interaction

Fig. 1-4 Integral Components of the ACTIVE Training Process
(Training Program, Township of Ocean School District, Oakhurst, N.J.)

---

[1] New Jersey trainees achieving 80 percent of the competencies are awarded Certificates of Achievement from the State Department of Education. See Appendix C for a sample copy.

TAPE TEST PROCEDURES



CHAPTER TWO

TEST PROCEDURES

A
P
E

In recent years, prominent educators have extolled the importance of educating the total child (i.e., mental, physical, social, and emotional). There has been an increasing awareness of the importance of motor and perceptual-motor activity programs, particularly in the preschool and primary grades. This chapter provides eight instruments for diagnosing the developmental needs of children of this age group so that motor and perceptual-motor activities can be individually prescribed. The instruments and their recommended usage are as follows:

Instrument	Application
1. Prekindergarten Motor Ability Screening Test	Preliminary screening for ages 4-5
2. Basic Motor Pattern Checklist: Group Screening	Preliminary screening for ages 3-5, or early primary grades
3. Basic Motor Pattern Checklist: Individual Screening	Comprehensive screening for ages 3-5, or children with severe motor problems
4. Basic Motor Ability Screening Test	Comprehensive screening for the severely or profoundly retarded (ambulatory)
5. Basic Movement Performance Profile	Comprehensive screening for the severely or profoundly retarded (ambulatory)
6. Motor Ability Test: Grades K-2[1]	Comprehensive screening for ages 5-7, or the mentally retarded and learning disabled
7. Motor Ability Test: Grades 3-6	Screening instrument for ages 8-11, or the motorically gifted
8. Perceptual-Motor Screening Instrument	General screening for perceptual, motor and perceptual-motor problems

---

[1] The motor ability test has been successfully field-tested and found to be a valid and reliable instrument for use with normal children in grades K-2, and with children who are mentally retarded, or learning disabled.

PREKINDERGARTEN MOTOR ABILITY SCREENING INSTRUMENTS

It is predicted that in the near future, most schools, public, parochial and private, will be providing instruction for all children three to five years of age. The recent passage of Education for the Handicapped Act in Washington, S6, requires that all states provide individualized instructional programs for students ages 3-21 as of 1980.[1] A very important aspect of the educational program for the preschool child should be the provision of a variety of gross and fine motor activities. Thus, the physical educator should be prepared to identify motor problems and to provide activity programs designed to resolve the deficiencies. Further, justification for prekindergarten screening is based on the fact that the school admissions requirements of most states are limited to an arbitrary chronological age, plus the approval of the family physician. Virtually no consideration is given to the developmental needs of children.

The three prekindergarten instruments presented provide the teacher with the capability of:

1. Screening *individuals* in a limited time period – Prekindergarten Screening Test
2. Screening *groups* during the regular instructional program – Basic Motor Pattern Checklist: Group Screening
3. *Comprehensive* screening of *individuals* as a follow-up to the administration of either of the former instruments.

Prekindergarten Screening Test

Administration. It is recommended that the screening instrument be administered to the children in the spring of the year, prior to their admission to school. The specific purposes for screening are:

1. To provide parents with information regarding developmental activities needed by their children prior to admission to school.
2. To provide principals with the names of those students who may benefit from the summer enrichment program that is conducted in the district.
3. To refer those children who evidence potential problems to the proper authority for a comprehensive examination.
4. To provide kindergarten teachers with some insight as to the capabilities of their incoming students.

Table 2-1 provides the form recommended to gather information regarding the developmental needs of children.

Test directions.[2] Table 2-1 provides specific test directions. Other considerations that will enhance the testing phase of the program will be elaborated upon at this time.

Experience has indicated that some children are apprehensive because of the strange environment and do not want to be tested. In those situations, give the mother a ball so that the child can play on his own. Usually, after a short period of time, he will adjust to the environment and willingly submit to the testing.

Be sure to demonstrate each task before the child performs. Further, permit one or more practice attempts; the rationale: you want to be sure the child fully comprehends what is expected of him and that his inability to perform thereafter will reflect a developmental "lag" rather than an inability to understand your directions.

While testing the child, continually have him verbalize by asking such questions as, "What color is the ball?" Also ask questions regarding the clothing he is wearing, have him count while he is bouncing the ball, etc. Another successful technique is to supplant the pencil with a lollipop for the ocular pursuit screening. With these techniques you can gather information regarding the child's cognitive ability and his speech patterns. The best time to administer the screening test is during the "Spring Roundup," i.e., when all prekindergarten students are registered for school by their parents. At that time, a learning disability specialist and/or speech therapist should be present to assist in the screening process.

Test scoring. The most expeditious method of scoring is by the use of a check mark (√) in those areas of deficiency. Of greater importance, is the recording of atypical behavior(s) manifested by the child. Such anecdotal remarks, may reveal a pattern which may be useful for future attention.

---

[1] The mandate requires educational compliance in accordance with the age requirements of the various states.

[2] The specific supply and equipment needs for testing are included in Appendix D which provides detailed information on material needed to implement a total D&A Program.

TABLE 2-1

PREKINDERGARTEN SCREENING TEST[1]

Name John Doe

Birth Date 9/69

Screened by: Mr. Thomas Pagano

Test Item No. 1: *Hop; 2L, 3R*

Factor: Balance/postural orientation, coordination serial order, laterality and cognition.

Test description: Teacher to demonstrate hopping and changing feet without identifying left or right. Instruct the child to hop twice on left foot and three times on the right foot. (If the student cannot distinguish his right from left foot, the instructor is to place his hand on the leg he wants the child to hop with.)

Assessment:

Balance on one foot ___
Shifting weight smoothly ✓
Gross coordination ✓
Serial order (l,r, or r,l) ___
Laterality
Concept of numbers ✓

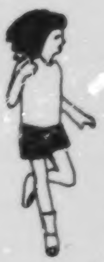


Figure 2-1. Hopping

Test Item No. 2: *Ball-Bounce and Catch*

Factor: Eye/hand coordination.

Test description: Have the child bounce a 6" playground ball to waist height and attempt to catch the ball with two hands (without the aid of any part of the body). Three attempts.

Assessment:

Eye/hand coordination ✓
Color discrimination ___

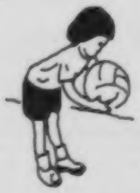


Figure 2-2. Ball-Bounce and Catch

Test Item No. 3: *Ocular Pursuit*[2]

Factor: Monocularity, binocularity, convergence.

Test description: Holding a pencil 20-24" from the subject's eyes, the instructor moves the pencil horizontally, vertically, diagonally, (both directions) and in a circle. The subject is requested to follow the movements with both eyes, without moving his head. (Move pencil in 18" arc with head as center of circle).

Assessment:

Tracking horizontally ___
Tracking vertically ___
Tracking diagonally ___
Tracking circle ___
Jerky pattern ___
Midline problem ___
Loses object ___
Lazy eye ___

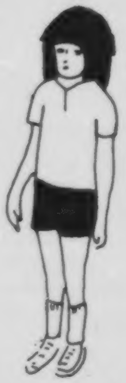


Figure 2-3. Ocular Pursuit

Test Item No. 4: *Speech* ___

Summary of Evaluation: *Difficulty with gross motor patterns, particularly when shifting body weight. Lack of spacial awareness concept. Recommend vision examination due to problems involving coordinating the eyes with motor tasks.*

---

[1] Courtesy of the Township of Ocean School District.

[2] Newell C. Kephart, *The Slow Learner in the Classroom*, pp. 146-149.

Basic Motor Pattern Checklist: Group Screening

Administration. The checklist is recommended for use in those situations where no time is allotted for individual screening. The teacher should enter all pupil names on Table 2-2, observe pupil performance during the regular instructional period and as appropriate tasks are performed, record the noted motor patterns and anecdotal remarks.

Test directions. Table 2-2 provides the form for recording behavior patterns. (A review of the "Basic Motor Pattern Checklist: Individual Screening" on pages 12-15 provides specific information as to typical and atypical movement patterns.

Test scoring. Test scoring information is provided in Table 2-2. To secure the test score:

1. Total the "deviant" motor patterns.
2. Total the "correct" motor patterns.
3. Divide the "total correct" by 14. The resultant score is referred to as the "percent of items passed."
4. Multiply the percent of items passed by 100. The resultant score is referred to as the Motor Ability Index (MAI).

Example:

Total correct: $\frac{3}{14}$ = .21 x 100 = 21
Total items:

MAI = 21

Basic Motor Pattern Checklist: Individual Screening

Administration: Godfrey and Kephart[1] have devised a very comprehensive instrument for assessing the motor performance of the prekindergarten child. It is recommended that this checklist be administered to those children who have been *previously identified* as possessing motor problems. Further, administration requires the testing of one student at a time.

Test directions. The test directions are detailed as follows: Entries should be made on the checklist by placing a check (√) in the blank in front of each applicable item under the "Pattern Elements Present" and the "Deviations Noted" columns. Under "Remarks" should be listed comments related to task performance. Statements should be factual rather than interpretive; for example: "would not try to kick the ball" or "does not comprehend" rather than "was bad."

---

[1] Adapted from Barbara Godfrey and Newell C. Kephart, *Motor Patterns and Motor Education* (New York: Appleton-Century-Crofts, 1969). Permission to publish granted.

TABLE 2-2

BASIC MOTOR PATTERN CHECKLIST: GROUP SCREENING (Prekindergarten)

Class: ______________ School: ______________ Screened By: ______________ Classroom Teacher: ______________ Date: ______________

Directions: Entries should be made on the checklist by placing a check (√) for correct motor patterns and an (x) for deviant motor patterns. Upon completion of the screening, total the "Deviant Motor Patterns" and "Correct Motor Patterns" for each child and record the scores in the appropriate boxes. Enter the percent of items passed, i.e., correct responses divided by 14, and the Motor Ability Index (MAI), i.e., total correct responses divided by "14" and multiplied by 100.

Name	Gross Body Coordination					Balance-Post. Orient.				Eye-Hand Coordination			Eye-Hand-Foot Accuracy		Assessment			MAI	Classification[1]
	Walk	Crawl	Climb/ Descend	Skip	Walk-In-Place	Stand Both Feet	Stand R/L Foot	Jump	Hop	Catch	Throw	Touch/ Bat	Throw Accuracy	Kick Accuracy	Deviant Motor Patterns	Correct Motor Patterns	Percent of Items Passed		
1.																			
2.																			
3.																			
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			
11.																			
12.																			
13.																			
14.																			
15.																			
16.																			
17.																			
18.																			
19.																			
20.																			

---

[1] Enter remarks and prescribed activities on other side.

GROSS BODY COORDINATION (GBC)

Pattern Elements Present / **Deviations Noted**

Walk

Pattern Elements Present

__ Advances opposite hand and leg
__ Alternates sides, rhythmically
__ Transfers weight fluidly
__ Swings leg and body through
__ Extends straight supporting leg
__ Plants heel on ground first
__ Walks in straight line

Deviations Noted

__ Shuffles, drag feet L __ R __
__ Jerks __ L side, __ R side, __ up, __ down
__ Leads with a side __ L __ R
__ Jars or lands with a heavy step __ L __ R
__ Sways markedly __ L __ R
__ Bends forward __ leans back
__ Hits one foot with other __ L __ R
__ Walks on toes __ L __ R

Remarks: ______________________________

Crawl

Pattern Elements Present

__ Uses all four limbs
__ Moves limbs alternately and in opposition
__ Touches four points in slow crawl
__ Keeps back level
__ Points hands forward
__ Moves forward
__ Moves evenly and rhythmically

Deviations Noted

__ Avoids using leg __ L __ R
arm __ L __ R
__ Leads with one side __ L __ R
__ Emphasizes use of one side __ L __ R
__ Slides or drags limb: leg __ L __ R
arm __ L __ R
__ Turns hands to side
__ Moves in a circular pattern
__ Moves arm and leg same side jointly

Remarks: ______________________________

Climb-Descend Stairs

Pattern Elements Present

__ Advances foot over foot
__ Moves R hand L foot forward together
__ Walks unsupported
__ Climbs/descends with body forward
__ Climbs in a straight line
__ Moves evenly and rhythmically
__ Keeps body well-aligned

Deviations Noted

__ Advances foot to foot on each step
__ R hand/R foot, L hand/L foot move forward together
__ Needs support
__ Climbs/descends with body sideward
__ Evidences poor body balance
__ Movements are jerky
__ Exhibits poor body mechanics

Remarks: ______________________________

Skip

Pattern Elements Present

__ Combines step, then hop
__ Alternates use of feet
__ Moves opposite arm and leg (up)
__ Moves in direct or straight path
__ Maintains balance easily
__ Skips forward, ____ circle
__ Moves evenly and rhythmically

Deviations Noted

__ Does not exhibit "true" skip (step-hop)
__ Skips one side only __ L __ R
__ Does not raise arm and leg
__ Displays extraneous arm movements
__ Doesn't use arms
__ Lands with a heavy step
__ Shuffles, trips or hits feet, ____ foot
__ Uses one arm better, __ L __ R
__ Crosses feet in front of body

Remarks: ______________________________

Walk-In-Place Pattern Elements Present	Deviations Noted
___ Keeps cadence with slow, audible signs. (one clap per second)	___ Demonstrates no semblance of cadence
___ Keeps cadence with fast, audible signal (two claps per second)	___ Keeps cadence irrhythmically
___ Varies cadence in conformance with varying tempo	___ Demonstrates inability to vary cadence
___ Performs in a smooth, even manner	___ Tends to favor left side of body, right side of body

Remarks: ___

BALANCE-POSTURAL ORIENTATION (BPO)

Stand Both Feet

___ Stands erect	___ Maintains slumped posture
___ Aligns body parts	___ Body parts out of line ___pelvis ___shoulder
___ Keeps feet parallel	___ Keeps feet toed out ___L ___R; in ___L ___R
___ Maintains head centered, balanced	___ Maintains head forward; ___side, ___L ___R turn ___L ___R
___ Keeps weight evenly distributed on feet	Keeps weight more on one foot, ___L ___R
___ Shifts weight evenly, equally	___ Maintains rigid, stiff stance
___ Keeps knees "easy," relaxed	___ Keeps knees hyper extended, locked ___L ___R
___ Keeps chest "up"; ___seat "in"	___ Is unable to stay standing in place

Remarks: ___

Stand Right or Left Foot

___ Centers weight on right foot or left foot	___ Loses balance: Weight on ___R foot, ___L foot
___ Uses extremities to maintain balance	___ Fails to use ___arms, ___ legs to aid in balance
___ Keeps weight evenly distributed over support leg	___ Exhibits rigid and inflexible support over support leg
___ Maintains balance with eyes opened or closed	___ Loses balance when eyes are open, closed

Remarks: ___

Jump – Feet Staggered or Parallel

___ Swings arms backward as legs bend	___ Fails to use ___backward arm swing, bent legs
___ Swings arms forward as legs extend	___ Fails to use ___forward arm swing, leg extension
___ Uses two-foot take off, feet staggered and parallel	___ Performs only ___ staggered, parallel takeoff
___ Maintains balance upon landing	___ Loses balance upon landing, ___ feet staggered, ___ parallel
___ Lands in predetermined square	___ Jumps to one side, ___L ___R
___ Lands with knees flexed and arms forward	___ Lands with knees "locked," ___ doesn't use arms to help

Remarks: ___

Pattern Elements Present

Hop – Left or Right Foot

- ___ Takes off on L or R foot and lands on same foot
- ___ Bends ankles and hips
- ___ Hops forward, rearward, and sideward
- ___ Alternates feet to count

Deviations Noted

- ___ Unable to hop ___L ___R
- ___ Hops rigidly
- ___ Unable to hop ___forward, ___rearward, ___sideward
- ___ Hops only on one foot ___L ___R

Remarks ______________________________

EYE-HAND COORDINATION (EHC)

Catch

- ___ Catches with both hands
- ___ Catches with ___L, ___R hand
- ___ Retains control of object
- ___ "Gives" to lessen impact
- ___ Follows object with eyes
- ___ Points fingers up, down and out
- ___ Handles easy throws, ___ hard throws

- ___ Catches against body only
- ___ Can't catch either hand, ___L ___R only
- ___ Exhibits rigidity, ___fingers arms
- ___ "Loses" object before catching
- ___ "Loses" eye contact upon receipt
- ___ Points fingers improperly
- ___ Can't catch overhead, ___ underhand

Remarks: Preferred hand ___L, ___R, ___No ______________________________

Throw

- ___ Propels object with swinging motion, pushing motion
- ___ Throws in opposition, i.e., use of opposite arm and leg
- ___ Completes throwing motion with push off rear foot
- ___ Propels object with L and R arm
- ___ Controls object while throwing
- ___ Exhibits varied throwing pattern

- ___ Lacks swing L, ___R; push ___L ___R
- ___ Uses only left side, ___ right side
- ___ Throws with arms only
- ___ Throws with L arm, ___R arm
- ___ Extends same side arm and leg forward
- ___ Throws only underhand, ___ overhand, ___sidearm

Remarks: Preferred hand ___L, ___R, ___No ______________________________

Touch and Bat Objects

- ___ Maintains "eye contact" with object
- ___ Touches and swings easily, directly
- ___ Touches stationary object with either hand

- ___ Loses "eye contact" with stationary, moving object
- ___ Pokes or jabs at object
- ___ Touches only with ___L, ___R hand

Pattern Elements Present	**Deviations Noted**
___ Bats stationary object with either hand	___ Bats only with ___ L, ___ R hand
___ Touches swinging object	___ Touches swinging object in front, ___ across the midline, ___ near
	___ side of the body
___ Touches and strikes object upon command	___ Responds after a delay when touching, striking
___ Uses arm and leg opposition when striking	___ Uses same arm and leg when striking
___ Contacts object squarely	___ Swings under object, ___ over object
___ Exhibits body rotation, ___ wrist follow through	___ Throws only with arms
___ Hits own toss, ___ oncoming ball	___ Displays jerky or, ___ stiff performance

Remarks: Preferred hand and side ___ L, ___ R, ___ No ______________________________

____

EYE-HAND ACCURACY (EHA)

Throw for Accuracy

___ Throws in any direction	___ Throws only forward, ___ left, ___ right, ___ up, ___ down
___ Strikes a stationary target (40″ x 60″); minimum throwing distance 6 feet	___ Strikes stationary target at 2 feet, ___ 4 feet
___ Throws a whiffleball (baseball circumference) through a moving tire (15″ diameter); minimum distance 6 feet	___ Cannot throw whiffleball through tire ___ at 6 feet, ___ through tire at 2 feet, ___ through tire at 4 feet

Remarks: Preferred hand: ___ L, ___ R, ___ No ______________________________

____

EYE-FOOT ACCURACY (EFA)

Kick for Accuracy

___ Swings leg from hip	___ Kicks with stiff leg
___ Kicks in opposition	___ Kicks one side, ___ L, ___ R
___ Kicks with either leg	___ Kicks only with right leg, ___ left leg
___ Strikes stationary or moving volleyball	___ Misses ball, ___ misses moving ball
___ Uses preparatory backswing and follow through	___ Does not use backswing, ___ follow through
___ Kicks in smooth, rhythmical fashion	___ Kicks jerky, ___ stiff fashion
___ Kicks in any direction	___ Kicks forward, ___ left, ___ right, ___ up, ___ down
___ Strikes a stationary target (40″ x 60″); kicking distance 6 feet	___ Strikes a stationary target at 2 feet, ___ 4 feet

Remarks: Preferred foot: ___ L, ___ R, ___ No ______________________________

____

PRESCRIPTION

FACTOR	DEFICIENCIES	STRENGTHS	TASKS/ACTIVITIES PRESCRIBED
GBC			
BPD			
EHC			
EHA			
EFA			

Remarks:

Test scoring. After administering the entire battery to the child, it is recommended the teacher:

1. Review all check marks and anecdotal remarks.
2. Record deficiencies and strengths in the section entitled "Prescription."
3. Record other pertinent information under "Remarks."

MOTOR ABILITY SCREENING INSTRUMENTS

Due to the varying developmental needs of children in the primary and lower elementary grades, it is essential that a variety of diagnostic instruments be available for teacher assessment of motor performance. The four following instruments enable the teacher to assess:

1. The motor ability performance of the trainable, severely, or profoundly retarded child (ambulatory) – Basic Motor Ability Screening Test
2. The movement performance of the severely and profoundly retarded child (ambulatory) – Basic Movement Performance Profile
3. The motor ability performance of educable mentally retarded, learning disabled, or normal children – Motor Ability Test, ages 5-7
4. The performance of the child who is gifted motorically – Motor Ability Test, ages 8-11

Basic Motor Ability Screening Test [1, 2]

Administration. The instrument should be administered on an individual basis to those students who either have difficulty comprehending directions, or refuse to perform tasks requested.

Test directions. Due to the criterion-referenced design of the test items (i.e., describes specific student behavior to be manifested), the instrument is self-explanatory.

---

[1] Modified instrument designed by Donald Hilsendager, Harold K. Jack, and Lester Mann, *Basic Motor Fitness Test for Emotionally Disturbed and Mentally Handicapped Children: Preliminary Report*, National Institute of Mental Health, Grant Number 1-TL-MH-8543-1, S. 1968.)

[2] Format patterned after the Basic Movement Performance Profile designed by H.F. Fait, *Special Physical Education: Adapted Corrective, Developmental* (Philadelphia: W.B. Saunders Co. 1972), pp. 208-210.

A. GROSS BODY COORDINATION

Test Item No. 1: *Walk*
Factor: Gross Body Coordination
0 – Makes no attempt to walk
1 – Walks with assistance
2 – Walks with an irregular bilateral pattern
3 – Walks with proper bilateral pattern for less than 15 feet
4 – Walks with proper bilateral pattern for 15 or more feet

Correct bilateral pattern: left arm-right foot and right arm-left foot.

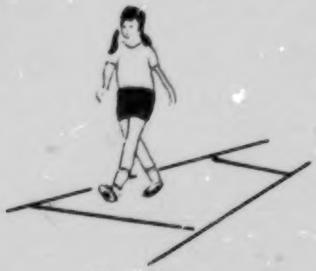


Fig. 2-4 Walk

Test Item No. 2: *Creep*
Factor: Gross Body Coordination
0 – Makes no attempt to creep
1 – Will creep when physically assisted
2 – Creeps with an irregular bilateral pattern
3 – Creeps alternating hands and knees for less than 10 feet
4 – Creeps properly for 10 or more feet

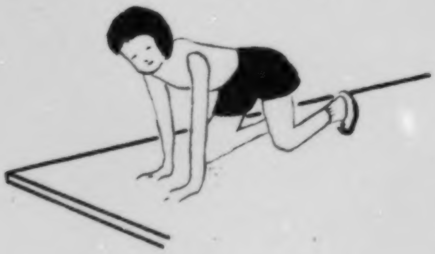


Fig. 2-5 Creep

Test Item No. 3: *Climb-stairs*
Factor: Gross Body Coordination
0 – Makes no attempt to walk up stairs
1 – Walks up one step and down with assistance
2 – Walks up and down 4 steps with assistance
3 – Walks up and down 4 steps; two feet on each step
4 – Walks up and down 4 steps; alternating one foot on each step

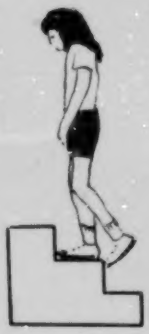


Fig. 2-6 Climb Stairs

Test Item No. 4: *Skip*
Factor: Gross Body Coordination
0 – Makes no attempt to skip
1 – Steps from left to right foot or right to left foot
2 – Hops on left or right foot
3 – Combines stepping and hopping in an irregular pattern
4 – Skips at least 10 feet in a smooth manner

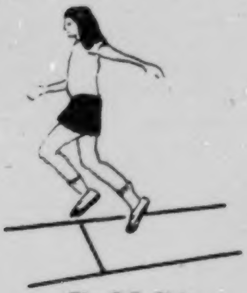


Fig. 2-7 Skip

Test Item No. 5: *March-in-Place*
Factor: Gross Body Coordination
0 – Makes no attempt to march-in-place
1 – Marches-in-place if physically assisted
2 – Marches in an irregular pattern
3 – Marches in a rhythmical pattern; 15 steps in 15 seconds
4 – Marches in a rhythmical pattern; 30 steps in 15 seconds

Note: The tester sets the cadence by clapping 1 clap per second (15 seconds) and 2 claps per second (15 seconds)

Maximum Total Points – Gross Body Coordination – 20 points

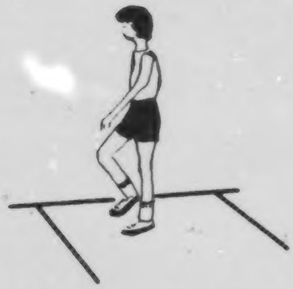


Fig. 2-8 March-In-Place

BALANCE AND POSTURAL ORIENTATION

Test Item No. 1: *Stand-both feet*
Factor: Balance-Postural Orientation

0 – Makes no attempt to assume the standing position
1 – Assumes the standing position, but will not extend the arms forward from the shoulders at a 90 degree and/or keep his eyes closed
2 – Assumes the correct standing position (arms extended and eyes closed) when assisted
3 – Assumes the correct standing position, but shifts his feet or moves his arms 15 degrees from the 90 degree position prior to the elapse of 15 seconds
4 – Assumes the correct standing position for 15 seconds

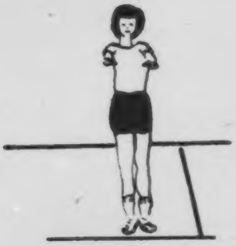


Fig. 2-9 Stand-Both-Feet

Test Item No. 2: *Stand-right foot*
Factor: Balance-Postural Orientation

0 – Makes no attempt to assume the standing position on right foot
1 – Assumes the standing position incorrectly, i.e., does not raise the left foot
2 – Assumes the correct standing position (weight on right foot, eyes open) when assisted
3 – Assumes the correct standing position, but shifts right foot or touches left foot to right leg, foot, floor or any other supporting structure prior to the elapse of 15 seconds
4 – Assumes the correct standing position for 15 seconds

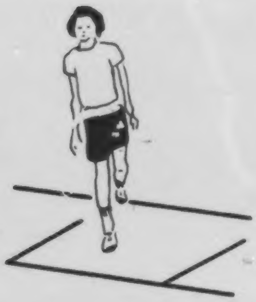


Fig. 2-10 Stand-Right-Foot

Test Item No. 3: *Stand-left foot*
Factor: Balance-Postural Orientation

0 – Makes no attempt to assume standing position on left foot
1 – Assumes the standing position incorrectly, i.e., does not raise the right foot
2 – Assumes the correct standing position (weight on left foot, eyes open) when assisted
3 – Assumes the correct standing position, but shifts left foot or touches right foot to left leg, foot, floor or any other supporting structure before time lapse of 15 seconds
4 – Assumes the correct standing position for 15 seconds

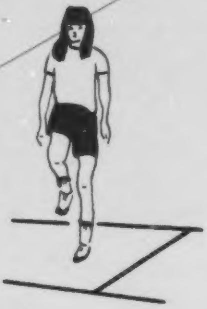


Fig. 2-11 Stand-Left-Foot

Test Item No. 4: *Jump-land feet staggered*
Factor: Balance-Postural Orientation

0 – Makes no attempt to jump off 18" high step or bench
1 – Steps down from step or bench with assistance
2 – Jumps with two-foot take-off and lands with assistance
3 – Jumps with two-foot take-off, but lands incorrectly, i.e., does not land with feet staggered or loses balance
4 – Jumps with two-foot take-off and lands correctly

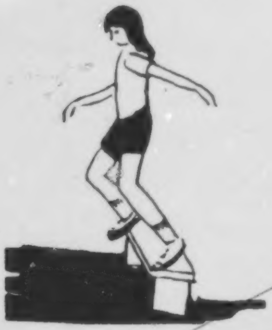


Fig. 2-12 Jump-Land Staggered Feet

Test Item No. 5: *Jump-land feet parallel*
Factor: Balance-Postural Orientation
0 – Makes no attempt to jump off 18" high step or bench
1 – Steps down from step or bench with assistance
2 – Jumps with two-foot take-off and lands with assistance
3 – Jumps with two-foot take-off, but lands incorrectly, i.e., does not land with feet parallel or loses balance
4 – Jumps with two-foot take-off and lands correctly

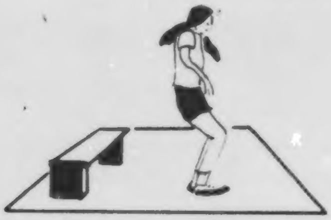


Fig. 2-13 Jump-Land Feet Parallel

Test Item No. 6: *Stationary jump-both feet*
Factor: Balance-Postural Orientation
0 – Makes no attempt to jump
1 – Jumps and lands with assistance
2 – Hops and lands with one-foot take-off

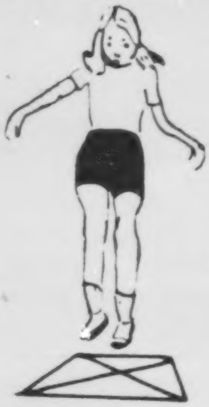


Fig. 2-14 Stationary Jump

3 – Jumps with two-foot take-off, lands without stopping, loses balance, uses a support, or steps on, or out of an 18" square
4 – Performs the jumping task correctly

Test Item No. 7: *Stationary hop-left foot*
Factor: Balance-Postural Orientation
0 – Makes no attempt to hop
1 – Hops with assistance
2 – Hops irregularly, i.e., intermixes hops, jumps and leaps
3 – Hops on left foot incorrectly, i.e., does not hop 3 times without stopping, loses balance, uses a support, or steps on, or out of an 18" square
4 – Performs the hopping task correctly

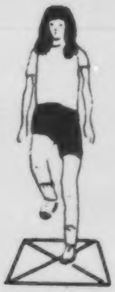


Fig. 2-15 Stationary Hop-Left Foot

Test Item No. 8: *Stationary hop-right foot*
Factor: Balance-Postural Orientation
0 – Makes no attempt to hop
1 – Hops with assistance
2 – Hops irregularly, i.e., intermixes hops, jumps and leaps
3 – Hops on right foot incorrectly, i.e., does not hop 3 times without stopping, loses balance, uses a support, or steps on, or out of an 18" square
4 – Performs the hopping task correctly

Maximum Total Points – Balance-Postural Orientation 32 points

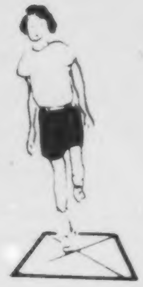


Fig. 2-16 Stationary Hop-Right-Foot

EYE-HAND COORDINATION

Test Item No. 1: *Catch*
Factor: Eye-Hand Coordination

0 – Makes no attempt to catch a whiffleball (softball circumference)
1 – Keeps eyes on the ball momentarily, but does not make contact with hands
2 – Keeps eyes on the ball, contacts it with hands, but does not catch the ball
3 – Catches the ball incorrectly, i.e., juggles the ball, or supports the ball with any other part of the body other than the hands
4 – Performs the task correctly (3 correct catches)

Note: The toss must be from a distance of 8 feet and thrown in a soft underhand manner. The trajectory should be such that it does not rise higher than the subject's head and reaches the receiver at chest level.

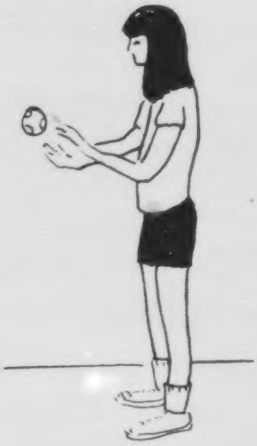


Fig. 2-17 Catch

Test Item No. 2: *Ball bounce and catch*
Factor: Eye-Hand Coordination

0 – Makes no attempt to bounce and catch a playground ball (8" diameter)
1 – Bounces the ball, but does not make contact with hands

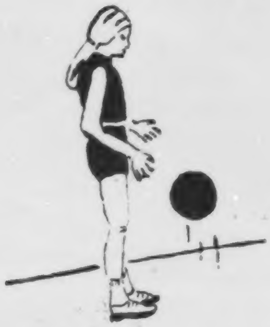


Fig. 2-18 Ball Bounce and Catch

2 – Bounces ball, keeps eyes on ball, makes contact with hands, but does not catch it
3 – Bounces the ball, but catches it incorrectly, i.e., juggles the ball or supports the ball with another part of the body other than the hands
4 – Bounces and catches the ball with the hands (3 times)

Test Item No. 3: *Touch ball swinging laterally*
Factor: Eye-Hand Coordination

0 – Makes no attempt to touch a stationary or swinging whiffleball (softball circumference)
1 – Touches a stationary ball with hand
2 – Touches a swinging ball with hand
3 – Touches a stationary ball with index finger 3 times; ball suspended left of mid-line, mid-line, and right of mid-line (head permitted to rotate)
4 – Touches a moving ball with index finger 3 times; ball to be touched on command left of mid-line, mid-line, and right of mid-line (head to remain motionless)

Note: The instructor holds the whiffleball suspended on an 18" cord at mid-chest level.

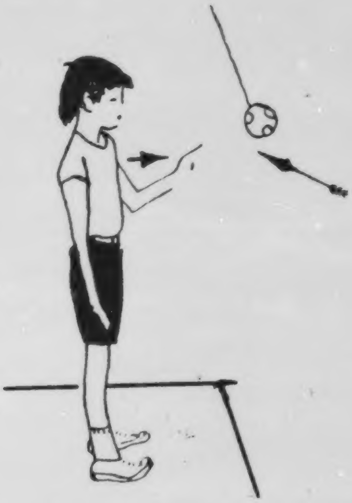


Fig. 2-19 Touch Ball Swinging Laterally

Test Item No. 4: *Touch ball swinging fore and aft*
Factor: Eye-Hand Coordination

0 – Makes no attempt to touch a stationary or swinging whiffleball (softball circumference)
1 – Touches a stationary ball with hand
2 – Touches a ball swinging fore and aft with hand
3 – Touches stationary ball with index finger 3 times (ball suspended at mid-line – 24", 18", and 12" from the student)
4 – Touches moving ball with index finger 3 times; ball to be touched on command at distance of 24", 18", and 12" from the student

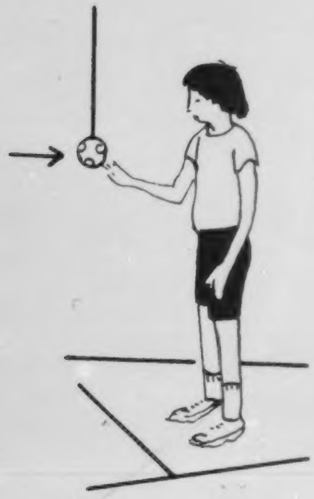


Fig. 2-20 Touch Ball Swinging Fore and Aft

Test Item No. 5: *Bat ball with hand*
Factor: Eye-Hand Coordination,

0 – Makes no attempt to bat a stationary or swinging whiffleball with hand
1 – Swings at a stationary ball, but does not strike the ball cleanly (i.e., hits the string)
2 – Swings at a moving ball, but does not strike the ball cleanly
3 – Bats a stationary ball with the hand correctly (3 times)
4 – Bats a moving ball (fore and aft) with the hand correctly (3 times)

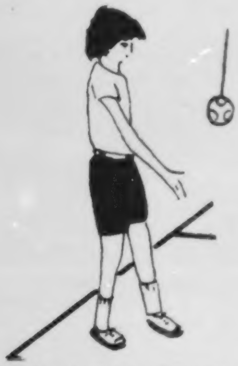


Fig. 2-21 Bat Ball with Hand

Test Item No. 6: *Bat ball with bat*
Factor: Eye-Hand Coordination

0 – Makes no attempt to strike a stationary or moving whiffleball with a plastic bat
1 – Swings bat at a stationary whiffleball, but does not strike the ball cleanly (i.e., hits the string)
2 – Swings bat at moving whiffleball, but does not strike the ball cleanly
3 – Strikes a stationary ball with bat correctly 3 times

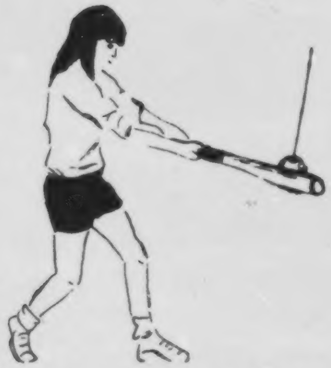


Fig. 2-22 Bat Ball with Bat

4 – Strikes a moving ball (fore and aft) with bat correctly (3 times)

Maximum Total Points – Eye-Hand Coordination – 24 points

EYE-HAND ACCURACY

Test Item No. 1: *Throw-right hand* (Refer to page 22 for target dimensions)
Factor: Eye-Hand Accuracy

0 – Makes no attempt to throw whiffleball with right hand
1 – Grasps ball with right hand and releases in an attempt to throw
2 – Throws or tosses the ball at a target 10 feet away, striking on or within the overall boundaries 1 of 3 attempts. The ball must hit the target without previously touching the floor for a correct attempt.

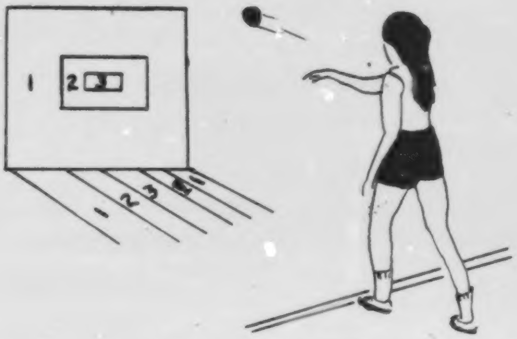


Fig. 2-23 Throw-Right Hand

3 – Two successful attempts in 3 tries
4 – Three successful attempts in 3 tries

Test Item No. 2: *Throw-left hand*
Factor: Eye-Hand Accuracy

0 – Makes no attempt to throw whiffleball with left hand
1 – Grasps ball with left hand and releases in an attempt to threw

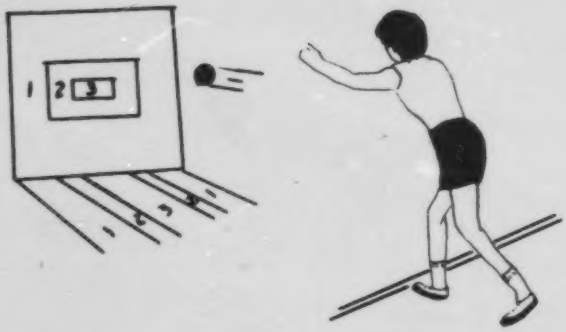


Fig. 2-24 Throw Left Hand

2 – Throws or tosses the ball at target 10 feet away, striking on or within the overall boundaries 1 of 3 attempts. The ball must hit the target without previously touching the floor for a correct attempt

3 – Two successful attempts in 3 tries

4 – Three successful attempts in 3 tries

Maximum Total Points – Eye-Hand Accuracy – 8 points

E. EYE-FOOT ACCURACY

Test Item No. 1: *Kick-right foot*

Factor: Eye-Foot Accuracy

0 – Makes no attempt to kick stationary volleyball with right foot

1 – Kicks ball at target, but does not strike it

2 – Kicks ball at target 10 feet away, striking on or within the overall boundaries 1 of 3 attempts. The ball may touch the floor prior to contacting the target

3 – Two successful attempts in 3 tries[1]

4 – Three successful attempts in 3 tries

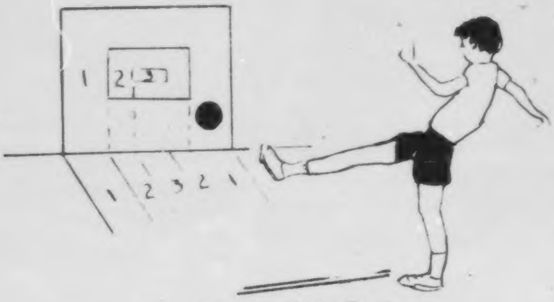


Fig. 2-25 Kick Right Foot

Test Item No. 2: *Kick-left foot*

Factor: Eye-Foot Accuracy

0 – Makes no attempt to kick stationary volleyball with left foot

1 – Kicks ball at target, but does not strike it

2 – Kicks ball at target 10 feet away, striking on or within the overall boundaries 1 of 3 attempts. The ball may touch the floor prior to contacting the target

3 – Two successful attempts in 3 tries

4 – Three successful attempts in 3 tries

Maximum Total Points – Eye-Foot Accuracy – 8 points

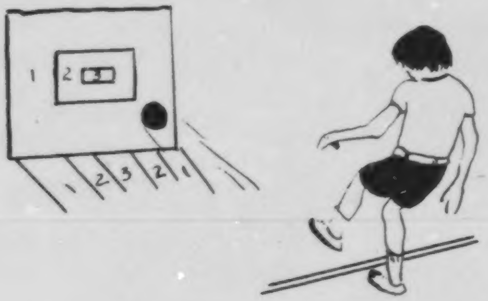


Fig. 2-26 Kick Left Foot

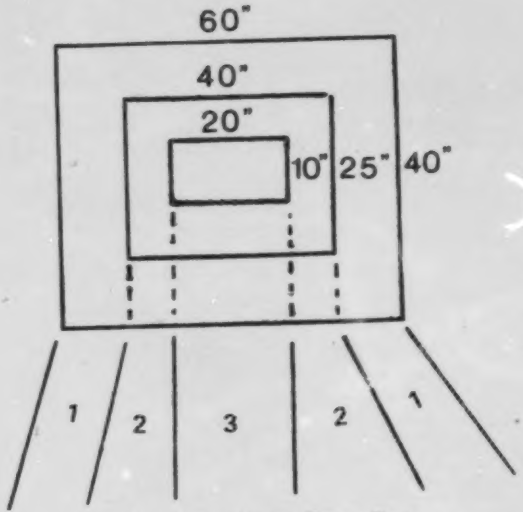


Fig. 2-27 Johnson Target Test

Test scoring. Individual item scores, ranging from "0" to "4" are recorded on Table 2-3. Upon completion of testing, the teacher should total the raw scores for each factor and record in the appropriate boxes.[1]

---

[1] A successful attempt is recorded if the ball strikes within the confines of the target.

[2] Note: Percentile [%] and stanine [s] norms will be available for distribution as of July 1, 1976.) Refer to Appendix E for a sample of a scoring sheet for recording the scores for an entire class.

TABLE 2-3

BASIC MOTOR ABILITY TEST FORM

Name: ______________________ School: ______________________________ Sex: __________

Age: ______ IQ: ________ Mental Age: ________ Classification: ________ Somatotype: __________

Date: ________ Classroom Teacher: ______________________ Total Score: ______________

TEST ITEM	FACTOR MEASURED	PRE–TEST			POST–TEST		
		Raw Score	%	S	Raw Score	%	S
1 Walk	Gross Body Coord.						
2 Creep	Gross Body Coord.						
3 Climb stairs	Gross Body Coord.						
4 Skip	Gross Body Coord.						
5 March-in-place	Gross Body Coord.						
TOTAL (Maximum – 20 points)							
1 Stand–both feet (15 sec.)	Bal-Post. Orient.						
2 Stand–right foot (15 sec.)	Bal-Post. Orient.						
3 Stand–left foot (15 sec.)	Bal-Post. Orient.						
4 Jump–one foot leading	Bal-Post. Orient.						
5 Jump–both feet simultaneously	Bal-Post. Orient.						
6 Jump–both feet	Bal-Post. Orient.						
7 Hop–right foot	Bal-Post. Orient.						
8 Hop–left foot	Bal-Post. Orient.						
TOTAL (Maximum – 32 points)							
1 Catch	Eye-hand Coord.						
2 Ball–bounce and catch	Eye-hand Coord.						
3 Touch ball swg. laterally	Eye-hand Coord.						
4 Touch ball swg. fore/aft	Eye-hand Coord.						
5 Bat ball with hand	Eye-hand Coord.						
6 Bat ball with bat	Eye-hand Coord.						
TOTAL (Maximum – 24 points)							
1 Throw-right hand	Eye-hand Accuracy						
2 Throw-left hand	Eye-hand Accuracy						
3 Kick-right foot	Eye-foot Accuracy						
4 Kick-left foot	Eye-foot Accuracy						
TOTAL (Maximum – 16 points)							
GRAND TOTAL (Stanine Points)							
MOTOR ABILITY INDEX							

ANECDOTAL REMARKS

____

____

____

Symbols

% – Percentile score

S – Stanine score

---

[1] (Source: Hilsendager, D.R., H.K. Jack and Lester Mann. *Basic Motor Fitness Test for Emotionally Disturbed and Mentally Handicapped Children: Preliminary Report*, 1968.)

Basic Movement Performance Profile[1,2]

Administration. The Basic Movement Performance Profile is an instrument to measure several basic movement abilities of the ambulatory lower level retardate. It is designed to evaluate the locomotor movements: crawling, walking, running, climbing, jumping, dodging and rolling; and the manipulative movements: carrying, hitting, pushing, pulling, throwing, catching and kicking. In addition, the B.M.P.P. evaluates a form of static and dynamic balance as well as the non-locomotor movement of hanging.

Those basic movements that are evaluated were selected on the basis of the basic movements that a lower level retardate would encounter in the environment of an institution. It is felt that if a lower level retardate can perform well on the B.M.P.P., he is capable of functional movement within an institutional society.

The B.M.P.P. does not measure any form of cardiorespiratory fitness and allowances are not made for emotional or behavior problems which have a definite effect on the functioning of a retardate in an institutional environment.

Test directions. The Basic Movement Performance Profile is designed to measure several basic movement abilities of a very atypical population. Since this population is the lower level retardate, careful considerations must be made by the evaluator to insure a valid representation of the retardate's performance. Every opportunity should be given the retardate to respond to the basic movement tasks in a manner representative of his capabilities. For this reason the following general testing procedures should be followed whenever possible.

1. Test each subject individually. Small groups of 5 to 6 subjects may be utilized as a test group. However, for each test item a demonstration should be given to each individual subject to assist him in understanding the concept of the basic movement he is to perform. The demonstration should be given immediately before the subject is to attempt the basic movement.
2. Provide a great deal of verbal encouragement. This encouragement should be given before, during and after the subject has attempted the basic movement.
3. The evaluator should be a person familiar to the subject and can thus be best able to draw from him a response representative of his capabilities. There should also be a recorder who does the marking on the score sheet.
4. Provide ample opportunity. If in the judgement of the evaluator the individual does not perform the basic movement representative of his capabilities he should allow him another opportunity to attempt the task. The evaluator should do this with caution and reservation. Since basic movements are the simplest form of movement, the individual may perform above his representative capabilities by chance if he is given too many attempts.

Explanation of Test Items

1. *Crawling:* Crawling is a locomotor basic movement which involves a four-point gait on the hands and knees. From this position one hand and the opposite knee are simultaneously lifted and placed forward. The propulsion for movement is a pushing action by the hand and knee on the floor.
   a. Equipment: Mat or series of mats at least 10 ft. in length.
   b. Testing Procedures:
      1. Demonstrate proper crawling form for 10 ft.
      2. Have subject sit on mat and instructor kneel 10 ft. away.
      3. Instructor calls resident to crawl to him.
         Note: Crawling with a shuffle is when resident moves the knee and hand on the same side simultaneously.
      4. If subject can crawl alternating knees and hands, demonstrate how to walk with body up-right on knees and toes for 10 ft. and ask subject to walk on knees without use of hands for 10 ft.
      5. Circle appropriate basic movement response on the score sheet.

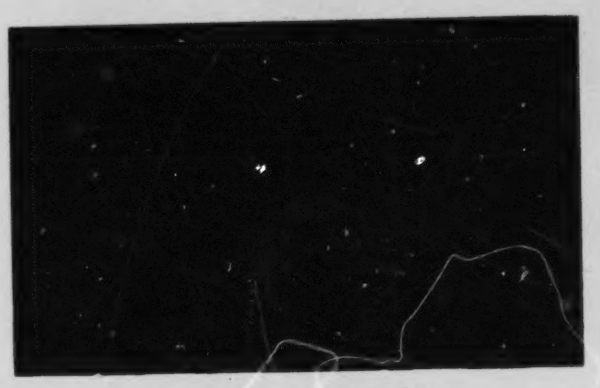


Fig. 2-28 Proper Crawling Pattern
(Training Program, Garnett-Green School, Omaha, Nebraska)

2. *Walking:* Walking is a locomotor basic movement which involves the repeated and controlled loss and recovery of balance while moving forward. The walking pattern employs simultaneously movements of the opposite arm and leg alterately.

---

[1] Developed for the Department of Physical Education, Mansfield Training School, Mansfield, Depot, CT. Appears in Fait, H.F.: *Special Physical Education: Adapted, Corrective, Developmental.* Philadelphia, W.B. Saunders Co., 1972, pp. 208-210. (Permission to publish granted.)

[2] Texas Women's University Modification of the Basic Movement Performance Profile. (Permission to publish granted.)

a. Equipment: Large flat surface.
b. Testing Procedures:
   1. Demonstrate proper walking form.
   2. Have subject stand approximately 15 ft. away from instructor.
   3. Instructor calls subject to walk to him. If subject will not walk, then instructor is to grasp his arm and gently pull him to assist in walking.
   4. Circle appropriate basic movement response on the score sheet.
   Note: Walking with a shuffle is dragging one or both feet.

3. *Walking up stairs:* Walking up stairs is a form of the basic movement pattern of walking except the forward movement is combined with the vertical movement of stepping up to a higher level.
   a. Equipment: Normal stairs of at least 4 steps.
   b. Testing Procedures:
      1. Demonstrate proper form for walking up 4 steps.
      2. Have subject stand on floor in front of the bottom step with the instructor on the 4th step.
      3. Instructor calls to subject to walk up the stairs. If subject will not walk up stairs, the instructor is to grasp his hands to assist him in walking.
      4. Circle appropriate basic movement response on the score sheet.
      Note: Walking up 4 steps; two feet on each step is when the subject steps up with one foot then brings the other foot up to the same step before stepping to the next highest level.

4. *Walking down stairs:* Walking down stairs is a form of the basic movement pattern of walking except the forward movement is combined with the vertical movement of stepping down to a lower level.
   a. Equipment: Normal stairs of at least 4 steps.
   b. Testing Procedures:
      Note: This test item can be combined with walking up stairs in that after the subject has completed 4 steps to where the instructor is the instructor demonstrates the proper walking form down the stairs and then calls to the subject.
      1. Demonstrate proper form for walking down 4 steps.
      2. Have subject stand on the 4th step with the instructor on the floor.
      3. Instructor calls subject to walk down the stairs. If subject will not walk down stairs, the instructor is to grasp the subject's hands to assist him in walking.
      4. Circle appropriate basic movement response on the score sheet.
      Note: Walking down 4 steps; two feet on each step is when the subject steps down with one foot then brings the other foot down to the same step before stepping to the next lowest level.

5. *Running:* Running is a locomotor basic movement which is essentially a fast walking pattern. The running pattern involves a brief period in the air when the weight shifts from the rear foot to the front. There is a forward inclination of the whole body and the arms are in the up position.
   a. Equipment: Large flat surface.
   b. Testing Procedures:
      1. Demonstrate proper running form for 25 yds.
      2. Have subject stand 25 yds. away from the instructor.
      3. Instructor calls subject to run to him.
      Note: Subject may need 4 or 5 yds. to get into running form; if this occurs the instructor should back up this amount while the subject is running to insure he runs 25 yds. If subject will not run, the instructor should grasp him at the elbow and gently pull to assist him in running.
      4. Circle appropriate basic movement response on the score sheet.

6. *Climbing:* Climbing is a locomotor basic movement which involves a four-point gait with the hands and feet. The movement is similar to that of crawling with the exceptions, the propulsive movements are with the hands and feet rather than the hands and knees and the movement is a vertical one rather than horizontal.
   a. Equipment: Ladder for a playground slide or a large step ladder. In each case there should be at least seven rungs.
   b. Testing Procedures:
      1. Demonstrate proper climbing form for 4 rungs.
      2. Have subject stand on the floor or ground in front of ladder with instructor at the top.
      3. Instructor calls subject to climb up the ladder. If subject will not climb the ladder, the instructor is to position himself behind the subject and assist him in climbing.
      4. Circle appropriate basic movement response on the score sheet.
      Note: Climbing 4 rungs; two feet on each rung is when the subject steps up with one foot then brings the other foot up to the same rung before stepping to the next highest level.

7. *Jumping:* Jumping is a locomotor basic movement in which the leg or legs are bent and forceably extended to propel the body into the air for the purpose of gaining height and/or distance. In the jump, the landing is always on two feet.

a. Equipment: Measuring tape or yardstick and adhesive tape or chalk.

b. Testing Procedures:

1. Place four parallel lines on the floor one foot apart.
2. Demonstrate the proper form for the standing broad jump.
3. Have subject line up with his toes (shoes on) in front of the first line and standing broad jump as far as possible.

   Note: Forward progress is measured from the heel landing closest to the starting line. Subject may not fall backwards after jump or put hand to the rear for support.
4. Allow the subject 3 jumps (record the best jump) and circle the appropriate basic movement response on the score sheet.

8. *Jumping:* Description same as for No. 7.

a. Equipment: 18 in. folding chair and mat.

b. Testing Procedures:

1. Place back of chair against the wall and mat in front of it.
2. Demonstrate proper form for jumping off the chair.
3. Have subject stand on chair with instructor standing on the mat.
4. Instructor calls to subject to jump off of the chair onto the mat. If the subject will not jump, the instructor is to grasp his hands to assist him in jumping.
5. Circle appropriate basic movement response on the score sheet.

9. *Dodging:* Dodging is a locomotor basic movement which involves a reactive sudden movement to avoid an encounter with an external object or person.

a. Equipment: Large cageball (3 ft. or 4 ft. diameter).

b. Testing Procedures:

1. Demonstrate proper form for dodging a rolling cageball.
2. Have subject stand close to a wall with instructor 15 ft. away.
3. Instructor rolls cageball at subject and calls to him to dodge the ball.

   Note: The ball should be rolled directly at the subject at about the speed of an adult in a brisk walking gait.
4. Circle appropriate basic movement response on the score sheet.

10. *Forward roll:* The forward roll is a locomotor basic movement which involves the complete turning over of the whole body frontwards.

a. Equipment: Flat mat.

b. Testing Procedures:

1. Demonstrate proper form for forward roll.
2. Have subject kneel on the edge of a mat while instructor kneels in front of subject and calls to him to do a forward roll.
3. Circle appropriate basic movement response on the score sheet.

11. *Balance (static):* Static balance involves maintaining a position in space and a relationship to gravity.

a. Equipment: Flat level surface and 5 lb. weight.

b. Testing Procedures:

1. Demonstrate proper form in balancing on one foot for 5 seconds.

   Note: Raised foot may be to the front or rear of balance foot and balance leg may have a slight bend at the knee. Arms may be up to assist in balance.
2. Instructor faces subject and calls for him to balance on one foot. If subject cannot balance on one foot, instructor grasps his hands for assistance.
3. If subject can balance on one foot for at least 5 seconds ask him to hold a 5 lb. weight in the same hand as elevated foot and balance for at least 5 seconds.
4. Circle appropriate basic movement response on the score sheet.

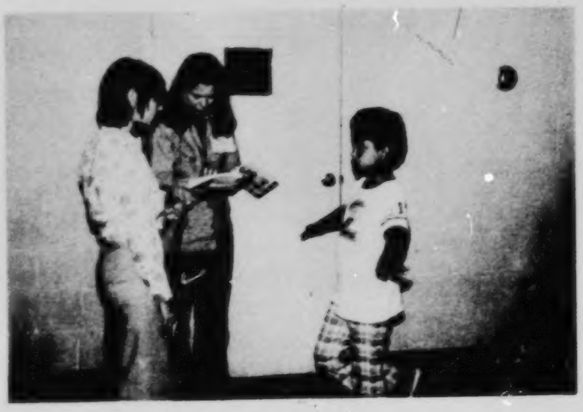


Fig. 2-29. Static Balance
(Training Program, University of Nebraska, Omaha)

12. *Balance (dynamic):* Dynamic balance involves maintaining good posture on a moving object or maintaining posture control while the body is moving.

a. Equipment: Low 4 in. balance beam 10 ft. in length.

b. Testing Procedures:

1. Demonstrate proper form for walking on balance beam for 10 ft.

2. Have subject stand on floor at one end of balance beam with the instructor at the opposite end.
3. Instructor calls to subject to step up on beam and walk to him. If subject will not step up on beam, instructor moves to him, straddles beam and grasps his hands to assist him.
4. If subject steps on beam with assistance, instructor is to walk backwards while straddling beam to assist him in walking.
5. Circle appropriate basic movement response on the score sheet.

13. *Carrying:* Carrying is a manipulative basic movement which involves the adjustment of the body to an additional external weight and mass while the individual is performing another basic movement such as walking or running.
    a. Equipment: Metal folding chair.
    b. Testing Procedures:
        1. Demonstrate proper form for lifting and carrying chair for 10 ft.
        2. Have subject stand by folded folding chair which is on the floor while instructor stands 10 ft. away.
        3. Instructor calls to subject to pick up the chair and carry it to him.
        4. Circle appropriate basic movement response on the score sheet.

14. *Hitting:* Hitting is a manipulative basic movement which involves the giving of momentum or impetus to an object by striking it with the hand, arm, or implement held in the hand or hands.
    a. Equipment: Volleyball and plastic baseball bat.
    b. Testing Procedures:
        1. Demonstrate proper form for hitting a stationary ball on the floor with a plastic bat.
        Note: Demonstrate using a two-handed swing, however, a one-handed swing is acceptable.
        2. Place volleyball on floor approximately 1 ft. in front of subject's feet and call to him to hit the ball with the bat.
        3. If subject hits the volleyball at least 3 of 5 attempts, demonstrate proper form in hitting a ball which has been rolled from 15 ft. away.
        4. Instructor stands 15 ft. away from subject and rolls the volleyball to him while calling to him to hit the ball.
        Note: The ball should be rolled approximately 1 ft. in front of the subject at about the speed of an adult in a brisk walking gait.
        5. Circle appropriate basic movement response on the score sheet.

Fig. 2-30 Prescriptive Task: Batting Ball Off Tee
(Township of Ocean Summer D&A Program, Oakhurst, N.J.)

15. *Pushing:* Pushing is a manipulative basic movement in which an object or body is given momentum or impetus by a force applied to it by another body or body part.
    a. Equipment: Wheelchair.
    b. Testing Procedures:
        1. Demonstrate proper form in pushing a wheelchair for 10 ft.
        2. Have subject stand behind the wheelchair with instructor 10 ft. in front of the wheelchair.
        3. Instructor calls to subject to push the wheelchair to him. If subject can push the wheelchair with a continuous motion for 10 ft., repeat the test with an adult occupant in the wheelchair.
        Note: A continuous motion is when the subject does not stop or veer radically from his path.
        4. Circle appropriate basic movement response on the score sheet.

16. *Pulling:* Pulling is a manipulative basic movement which is the reverse of pushing. It involves a force by an extended part of the body applied to bring an object towards the body or make that object follow the body when moving.
    a. Equipment: Wheelchair.
    b. Testing Procedures:
        1. Demonstrate proper form in pulling a wheelchair for 10 ft.
        Note: Wheelchair may be pulled by walking backwards or turning sidewards and walking.
        2. Have subject stand behind the wheelchair with instructor 10 ft. behind him.
        3. Instructor calls to subject to pull the wheelchair to him. If he can pull the wheelchair with a continuous motion for 10 ft., repeat the test with an adult occupant in the wheelchair.
        Note: A continuous motion is when the subject does not stop or veer radically from his path.
        4. Circle appropriate basic movement response on the score sheet.

17. *Throwing:* Throwing is a manipulative basic movement which involves the propulsion of an object with the hand(s) and arm(s).
   a. Equipment: Softball.
   b. Testing Procedures:
      1. Demonstrate proper form for throwing a softball overhand for 30 ft.
      2. Have subject stand 30 ft. from instructor with a softball. Instructor calls to him to throw softball to him.
         Note: If subject throws just short of 30 ft., instructor should back up and call to him to throw the softball to him.
      3. Allow the subject 3 throws (use the best throw) and circle appropriate basic movement response on the score sheet.

Fig. 2-31 Proper Throwing Form
(Township of Ocean Summer D&A Program, Wayside, N.J.)

18. *Catching:* Catching is a manipulative basic movement in which an object that is moving toward an individual is received and controlled by the hands or hands and arms.
   a. Equipment: Bean Bag.
   b. Testing Procedures:
      1. Demonstrate proper form for catching a bean bag that is tossed from 5 ft. away.
      2. Have subject stand 5 ft. from instructor. Instructor tosses bean bag to him and calls to him to catch the bean bag.
         Note: The toss should be a soft underhand toss approximately chest high to the subject.
      3. Circle appropriate basic movement response on score sheet.

19. *Kicking:* Kicking is a manipulative basic movement which involves the striking of an object at rest or moving with the foot or leg to propel or deflect that object.
   a. Equipment: Soccer ball.
   b. Testing Procedures:
      1. Demonstrate proper form in kicking a stationary ball several feet.
      2. Have subject stand behind stationary ball with instructor standing several feet in front of the ball. Instructor calls to him to kick the ball to him.
      3. If subject can kick a stationary ball several feet in intended direction, instructor should demonstrate proper form in kicking a ball which has been rolled from 15 ft. away in direction of the person rolling the ball.
      4. Instructor stands 15 ft. away from subject and rolls the ball to him while calling to him to kick the ball back.
         Note: The ball should be rolled directly at the subject at about the speed of an adult in a brisk walking gait.
      5. Circle appropriate basic movement response on the score sheet.

20. *Hanging:* Hanging is a non-locomotor basic movement which involves fixing one or more parts of the body to a stable object and supporting the weight of the rest of the body that is suspended below.
   a. Equipment: Horizontal bar.
   b. Testing Procedures:
      1. Demonstrate proper form for hanging from horizontal bar for 10 seconds.
         Note: The horizontal bar should be of such a height that the feet do not drag the floor. A chair may be utilized to mount the bar.
      2. Have subject grasp horizontal bar with both hands and hang. If he is unable to hang from bar, instructor should grasp him at the thighs to assist him.
      3. Circle appropriate basic movement response on the score sheet.

Test scoring. The aforementioned test directions are condensed below to facilitate testing. Record individual performance scores on Table 2-4 (page 30). The total score may range from a low of "0" to a high of "80." Refer to Appendix F for a sample of a composite scoring form.)

Name: ______________________________

School: ______________________________

Age: ____ Sex: ____ Date: ______ Total Score: ______

Mental Retardation Classification: ______________

Circle appropriate basic movement response

1. Crawling
   0-makes no attempt to crawl
   1-will stand on hands and knees
   2-crawls with a shuffle
   3-crawls alternating hands and knees
   4-can walk on knees without use of hands for 10 feet

2. Walking
0-makes no attempt at walking
1-walks while being pulled
2-walks with toe-heel placement
3-walks with a shuffle
4-walks with heel-toe placement and opposite arm-foot swing

3. Walking (up 4 stair steps)
0-makes no attempt to walk up stairs
1-steps up one step with assistance
2-walks up 4 steps with assistant
3-walks up 4 steps; two feet on each step
4-walks up 4 steps; alternating one foot on each step

4. Walking (down 4 stair steps)
0-makes no attempt to walk down stairs
1-steps down one step with assistance
2-walks down 4 steps with assistance
3-walks down 4 steps, two feet on each step
4-walks down 4 steps, alternating one foot on each step

5. Running
0-makes no attempt to run
1-takes long walking steps while being pulled
2-takes running steps while being pulled
3-jogs (using toe or flat of foot)
4-runs for 25 yards with both feet off the ground when body weight shifts from the rear to front foot

6. Climbing (4 rungs; 1st choice, ladder for slide, 2nd choice, step ladder)
0-makes no attempt to climb ladder
1-climbs at least one rung with assistance
2-climbs 4 rungs with assistance
3-climbs 4 rungs, two feet on each rung
4-climbs 4 rungs, alternating one foot on each rung

7. Jumping (standing broad jump, 3 attempts)
0-makes no attempt to jump
1-jumps with a one foot stepping motion
2-jumps from crouch with two foot take-off and landing for at least 1 ft.
3-jumps from crouch with two foot take-off and landing for at least 2 ft.
4-jumps from crouch with two foot take-off and landing for at least 3 ft.

8. Jumping (two foot take-off and landing from 18 in. folding chair)
0-makes no attempt
1-steps down from chair with assistance
2-steps down from chair
3-jumps off chair with two foot take-off and landing with assistance
4-jumps off chair with two foot take-off and landing while maintaining balance

9. Dodging (a large cage ball rolled from 15 ft. away)
0-makes no attempt to dodge ball
1-holds up hands or foot to stop ball
2-turns body to avoid ball
3-dodges ball at least 5 of 10 attempts
4-dodges ball at least 8 of 10 attempts

10. Forward roll
0-makes no attempt to do forward roll
1-puts hands and head on mat
2-puts hands and head on mat and pushes with feet and/or knees in an attempt to do roll
3-performs yoll but tucks shoulder and rolls to side
4-performs forward roll

11. Balance (standing on one foot with shoes on)
0-makes no attempt to stand on one foot
1-makes some attempt to stand on one foot
2-stands on one foot with assistance
3-stands on one foot for at least 5 seconds
4-stands on one foot for at least 5 seconds with 5 lbs. weight in the same hand as elevated foot

12. Balance (4 in. beam with shoes on)
0-makes no attempt to stand on beam
1-stands on beam with assistance
2-walks at least 5 steps with assistance
3-walks at least 5 ft. without stepping off beam
4-walks at least 10 ft. without stepping off beam

13. Carrying (folded folding chair)
0-makes no attempt to lift chair from floor
1-attempts but not able to lift chair from floor
2-lifts chair from floor
3-carrys chair by dragging on the floor
4-carrys chair 10 ft.

14. Hitting (volleyball with plastic bat)
0-makes no attempt to hit ball
1-hits stationary ball fewer than 3 of 5 attempts
2-hits stationary ball at 18 ft. at least 3 of 5 attempts
3-hits ball rolled from 15 feet away fewer than 3 of 5 attempts
4-hits ball rolled from 15 ft. away at least 3 of 5 attempts

15. Pushing (wheelchair)
0-makes no attempt to push wheelchair
1-makes some attempt to push wheelchair
2-pushes wheelchair once with arms only
3-pushes wheelchair with continuous motion for 10 ft.
4-pushes wheelchair carrying adult occupant continuously for 10 ft.

16. Pulling (wheelchair)
0-makes no attempt to pull wheelchair
1-makes some attempt to pull wheelchair
2-pulls wheelchair once with arms only
3-pulls wheelchair with continuous motion for 10 ft.
4-pulls wheelchair carrying adult occupant continuously for 10 ft.

17. Throwing (overhand softball, 3 attempts)
- 0-makes no attempt to throw
- 1-grasps ball and releases in attempt to throw
- 2-throws or tosses ball a few feet in any direction
- 3-throws ball at least 15 ft. in air in intended direction
- 4-throws ball at least 30 ft. in the air in intended direction

18. Catching (bean bag tossed from 5 ft. away)
- 0-makes no attempt to catch bean bag
- 1-holds both arms out to catch bean bag
- 2-catches bean bag fewer than 5 of 10 attempts
- 3-catches bean bag at least 5 of 10 attempts
- 4-catches bean bag at least 8 of 10 attempts

19. Kicking (soccer ball)
- 0-makes no attempt to kick stationary ball
- 1-pushes stationary ball with foot in attempt to kick it
- 2-kicks stationary ball a few feet in any direction
- 3-kicks stationary ball several feet in intended direction
- 4-kicks ball rolled from 15 ft. away in direction of roller

20. Hanging (2 hands on horizontal bar)
- 0-makes no attempt to grasp bar
- 1-makes some attempt to hang from bar
- 2-hangs from bar with assistance
- 3-hangs from bar for at least 5 seconds
- 4-hangs from bar for at least 10 seconds

TABLE 2-4

BASIC MOVEMENT PERFORMANCE PROFILE
INDIVIDUAL SCORE SHEET

Name: ____________________ School: ____________________ Sex: __________

Age: ______ IQ: ______ Mental Age: ______ Classification: ________ Somatotype: __________

Date: ________ Classroom Teacher: ____________________ Total Score: ______________

Basic Movement Response	0	1	2	3	4	Sub-Total
1. Crawl						
2. Walk						
3. Walk up stairs						
4. Walk down stairs						
5. Run						
6. Climb						
7. Broad Jump						
8. Jump off chair						
9. Dodge cage ball						
10. Forward Yoll						
11. Balance one foot						
12. Balance beam (4")						
13. Carry folded chair						
14. Hit volleyball						
15. Push wheelchair						
16. Pull wheelchair						
17. Throw overhand						
18. Catch bean bag						
19. Kick soccer ball						
20. Hang horizontal bar						
Circle One: Pre-Test Post-Test					Total Score	

Prescriptive Remarks: ______________________________

____

____

MOTOR ABILITY TEST, Ages 5-7[1]

Administration. The Motor Ability Test is similar in design to the Basic Motor Ability Screening Test presented on pages 17-22. However, the test directions are replicated because each instrument serves a different diagnostic function. The basic instrument is applicable for those subjects who have difficulty with comprehension, for example, the severely retarded. Thus, the test item descriptors are amenable to teacher diagnoses of a lower level of pupil performance. The Motor Ability Test provides the teacher with a diagnostic tool which will aid in the assessment of the mildly retarded, learning disabled, or motorically handicapped child.

The motor skill battery presented is a modification of the Temple University-Buttonwood Farms Project.[2]

Test directions. The tester should observe student performance carefully and record ancecdotal remarks for all failures so that an individualized program can be prescribed.

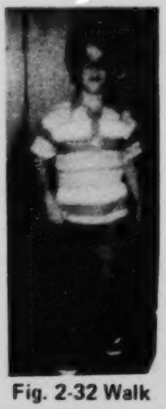


Fig. 2-32 Walk

GROSS BODY COORDINATION

Test Item No. 1: *Walk*
Factor: Gross Body Coordination
Subject must walk at least fifteen feet in a smooth manner. Bilateral coordination of opposite arm and leg is required, i.e., left arm-right foot and right arm-left foot, plus subjective evaluation of gross body coordination.
Attempts: 2 Scoring: Maximum – 2 points

Test Item No. 2: *Creep*
Factor: Gross Body Coordination
Bilateral coordination of opposite hand and knee is required, i.e., left hand-right knee must come forward at the same time and right hand-left knee must come forward at the same time. Subject must creep (hands and knees) at least ten feet (5 x 10 mat) to pass.
Attempts: 2 Scoring: Maximum – 2 points

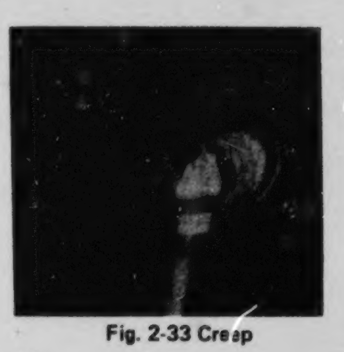


Fig. 2-33 Creep

Test Item No. 3: *Climb-stairs*
Factor: Gross Body Coordination
Subject must climb at least four consecutive steps (twelve inches high) by using alternate footwork. Both feet must not come together on a step, but rather one foot on one step and the next step with the other foot; no support may be given. (Corridor stairs may be used.)
Attempts: 2 Scoring: Maximum – 2 points

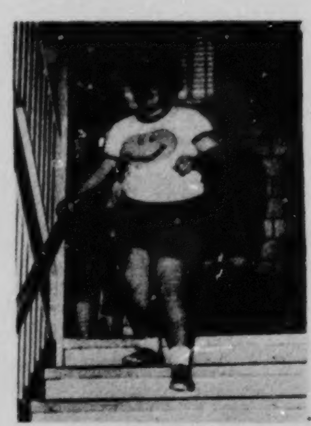


Fig. 2-34 Climb-Stairs

Test Item No. 4: *Skip*
Factor: Gross Body Coordination
Subject must skip at least ten feet in a smooth manner (without extra hops). One practice attempt shall be permitted.
Attempts: 2 Scoring: Maximum – 2 points

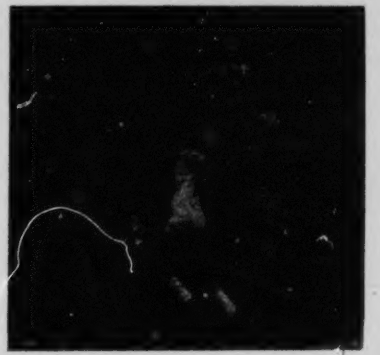


Fig. 2-35 Skip

---

[1] Should you desire to administer the Motor Ability Test to a child with a medically-oriented problem, be sure you have a medical release form signed by the parent and family or school physician, plus prescriptive activities from the physician.

[2] Donald Hilsendager, Harold K. Jack, and Lester Mann, *Basic Motor Fitness Test for Emotionally Disturbed Children*, pp. 7-11.

Test Item No. 5: *March-in-place*
Factor: Gross Body Coordination
To pass, the subject must keep in cadence with the tester who claps cadence of one clap per second (15 seconds) for the first attempt and two claps per second (15 seconds) for the second attempt.
Attempts: 2 Scoring: Maximum – 2 points

Subject's score on gross body coordination is the number of successful accomplishments in ten attempts. All of the gross body coordination skills should evidence total body coordination for a passing attempt.
Maximum total points – Gross Body Coordination – 10 points

Fig. 2-36 March-In-Place

BALANCE/POSTURAL ORIENTATION

Test Item No. 1: *Stand-both Feet*
Factor: Balance-Postural Orientation
Subject must stand with feet together, arms extended forward from shoulders at a 90 degree angle and eyes closed for fifteen seconds. An unsuccessful attempt is recorded if the subject shifts his feet, or moves arms 15 degrees from the 90 degree position.
Attempts: 3 Scoring: Maximum – 3 points

Fig. 2-37 Stand-Both Feet

Test Item No. 2: *Stand-right Foot*
Factor: Balance-Postural Orientation
Subject must stand on right foot with left foot off the floor and not touch any stable object for fifteen seconds (eyes open). Unsuccessful attempt if subject shifts right foot or touches left foot to right leg, foot, floor, or any other supporting structure before the elapse of fifteen seconds.
Attempts: 3 Scoring: Maximum – 3 points

Fig. 2-38 Stand-Right Foot

Test Item No. 3: *Stand-left Foot*
Factor: Balance-Postural Orientation
Same directions as for test item No. 2 except feet are reversed.
Attempts: 3 Scoring: Maximum – 3 points

Fig. 2-39 Stand-Left Foot

Test Item No. 4: *Jump – Feet Staggered*
Factor: Balance-Postural Orientation
Subject must jump off eighteen-inch high step or bench with one foot in front of the other. No support is allowed and balance must be maintained on landing (no shift of feet). The tester should have the subject jump and land in an area immediately adjacent to the bench.
Attempts: 3 Scoring: Maximum – 3 points

Fig. 2-40 Jump – Feet Staggered

Test Item No. 5: *Jump – Feet Parallel*
Factor: Balance-Postural Orientation
Same procedure as test item No. 4 except feet are side by side.
Attempts: 3 Scoring: Maximum – 3 points

Fig. 2-41 Jump – Feet Parallel

Test Item No. 6: *Stationary Jump Both Feet*
Factor: Balance-Postural Orientation
Subject must jump on both feet for at least three jumps without stopping, losing balance, using a support, or stepping on, or out of an 18" square.
Attempts: 3 Scoring: Maximum – 3 points

Fig. 2-42 Stationary Jump – Both Feet

Test Item No. 7: *Stationary Hop Left Foot*
Factor: Balance-Postural Orientation
Subject must hop on left foot for at least three hops without stopping, losing balance, using a support, or stepping on, or out of an 18" square.
Attempts: 3 Scoring: Maximum – 3 points

Fig. 2-43 Stationary Hop – Left Foot

Test Item No. 8: *Stationary Hop Right Foot*
Factor: Balance-Postural Orientation
Same procedure as test item No. 7 except the subject hops on right foot.
Attempts: 3 Scoring: Maximum – 3 points

Subject's composite score on Balance-Postural Orientation is the number of successful accomplishments in twenty-four attempts.
Maximum total points – Balance-Postural Orientation – 24 points

Fig. 2-44 Stationary Hop – Right Foot

EYE AND HAND COORDINATION

Test Item No. 1: *Catch*
Factor: Eye and Hand Coordination
To pass, the subject must catch a whiffleball (the circumference of a softball) using only his hands. Juggling the ball, having it strike any part of the body, other than the hands, or dropping the ball, constitutes a failure. The toss must be from a distance of eight feet and thrown in a soft, underhand manner. The trajectory should be such that it does not rise higher than the subject's head and reaches the receiver at chest level.
Attempts: 3 Scoring: Maximum – 3 points

Fig. 2-45 Catch

Test Item No. 2: *Ball bounce and catch*
Factor: Eye and Hand Coordination
The student must drop or push an eight inch diameter utility ball to the ground and catch it on the rebound immediately, no intervening bounces are permitted. Juggling the ball, having it strike any part of the body (other than the hands), or a drop, constitutes a failure.
Attempts: 3 Scoring: Maximum – 3 points

Test Item No. 3: *Touch ball swinging laterally*
Factor: Eye and Hand Coordination
With dominant hand on shoulder (palm down, index finger extended and hand motionless), the subject on command "touch" must touch laterally swinging whiffleball (softball circumference) with the index finger on the side of the ball. The instructor holds the whiffleball suspended on an 18" cord at mid-chest level and proceeds to swing the ball laterally. Commands are issued: (1) when

the ball is at full arm extension across the midline; (2) when the ball is at the midline; and (3) when the ball is at full arm extension on the dominant side of the midline. An unsuccessful attempt is recorded if the subject delays response, touches the ball with other than the index finger, misses, or moves his head.

Attempts: 3 Scoring: Maximum – 3 points

Fig. 2-46 Ball Bounce and Catch

Test Item No. 4: *Touch ball swinging fore and aft*
Factor: Eye and Hand Coordination
With dominant hand on hip (palm up, index finger extended and head motionless), the subject on command "touch" must touch fore and aft swinging whiffleball (softball circumference) with index finger on the under surface of the ball. The instructor holds the whiffleball suspended on an 18" cord at midchest level and issues commands: (1) when the ball is at full arm extension; (2) when the ball is at midpoint; and (3) when the ball is closest to the subject. An unsuccessful attempt is recorded if the subject delays response, touches the ball with other than the index finger, misses, or moves his head.

Attempts: 3 Scoring: Maximum – 3 points

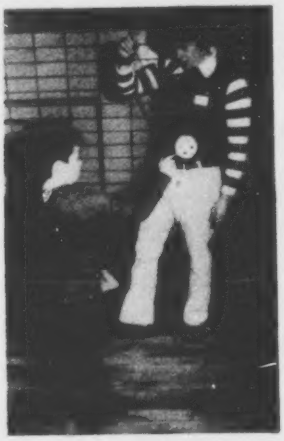


Fig. 2-47 Touch Ball Swinging Laterally

Test Item No. 5: *Bat ball with hand*
Factor: Eye and Hand Coordination
Same procedure as test item No. 4 except the subject bats the ball with an open hand held in readiness between the waist and shoulder. An unsuccessful attempt is recorded if some part of the hand does not touch some part of the ball.

Attempts: 3 Scoring: Maximum – 3 points

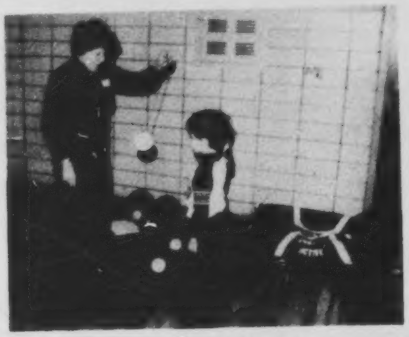


Fig. 2-48 Touch Ball Swinging Fore and Aft

Test Item No. 6: *Bat ball with bat*
Factor: Eye and Hand Coordination
Same procedure as test item No. 4 except the subject bats the ball with a plastic whiffleball bat which is held in readiness between the waist and the shoulder. An unsuccessful attempt is recorded if some part of the bat does not touch some part of the ball.

Attempts: 3 Scoring: Maximum – 3 points
Maximum total points – Eye and Hand Coordination – 18 points

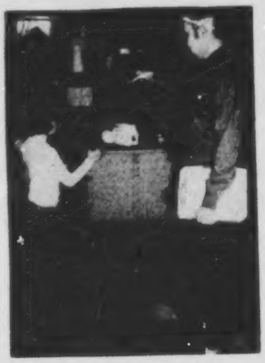


Fig. 2-49 Bat Ball with Hand

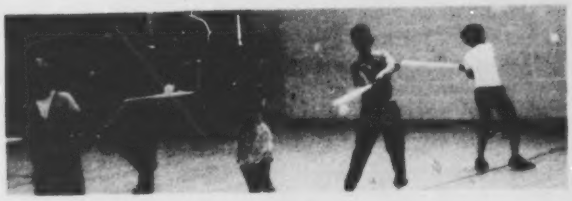


Fig. 2-50 Bat Ball with Bat

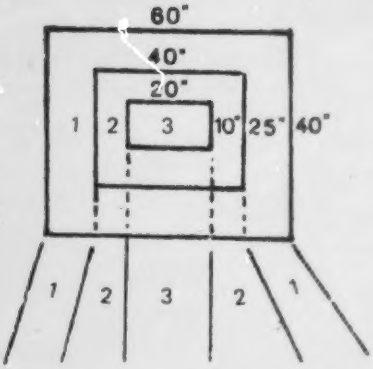


Fig. 2-51 Johnson Target Test

EYE AND HAND ACCURACY

Test Item No. 1: *Throw – Right Hand*
Factor: Eye and Hand Accuracy
The subject throws a whiffleball (softball circumference) at a modified version of the Johnson Test.[1] (See illustration below). The subject may use either an overhand or underhand throwing motion; minimum throwing distance ten feet. The ball must hit the target without previously touching the floor for a correct attempt. Scoring: 3 points, inner rectangle and line; 2 points, middle rectangle and line; 1 point, outer rectangle and line.
Attempts: 3 Scoring: Maximum – 9 points

Fig. 2-52 Throw – Right Hand

Test Item No. 2: *Throw – Left Hand*
Factor: Eye and Hand Accuracy
Same procedure as test item No. 1 except that subject throws with the left hand. Subject's composite score on eye and hand accuracy is the total number of points in six attempts.
Attempts: 3 Scoring: Maximum – 9 points
Maximum total points – Eye and Hand Accuracy – 18 points

Fig. 2-53 Throw – Left Hand

Fig. 2-54 Kick – Right Foot

EYE AND FOOT ACCURACY

Test Item No. 1: *Kick – Right Foot*
Factor: Eye and Foot Accuracy
Same procedure as test item No. 1 above except the subject kicks stationary volleyball at the target with his right foot and the ball may touch the floor prior to contacting the target.
Attempts: 3 Scoring: Maximum – 9 points

Test Item No. 2: *Kick – Left Foot*
Factor: Eye and Foot Accuracy
Same procedure as test item No. 1 except the subject kicks stationary volleyball with his left foot.
Attempts: 3 Scoring: Maximum – 9 points

Subject's composite score on eye-foot accuracy is the total number of points scored in six attempts.
Maximum total points – Eye and Foot Accuracy – 18 points

Maximum Grand Total – 88 points

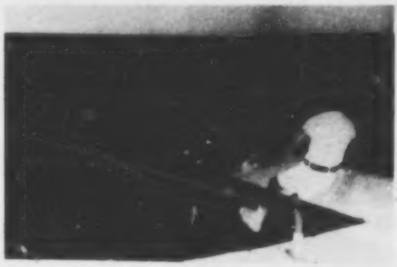


Fig. 2-55 Kick – Left Foot

---

[1] L. William Johnson, "Objective Test in Basketball for High School Boys."

Test scoring. The Motor Ability Test Form presents items clustered in terms of the following factors: gross body coordination; balance and postural orientation; eye-hand coordination; eye-hand accuracy; and eye-foot accuracy. The student's raw scores in each area (for the number of attempts indicated), plus the anecdotal remarks describing how the tasks are performed, should be recorded. Each trial in gross body coordination, balance and postural orientation, and eye-hand coordination is recorded on the score sheet in the trial column with a plus (+) to indicate success and a zero (0) to indicate failure. The total number of pluses will be the raw score. In the areas of eye-hand accuracy and eye-foot accuracy, the target scores for each trial (or a zero if the target is missed completely) are each entered as a trial score (example 2-0-1). A total for the accuracy task is then recorded in the raw score column. Sub-totals for each component area and a grand total for all raw scores are computed on the score sheet. If a student completes all attempts successfully, he will compile a grand total of 88 points.

The raw scores will later be converted into percentiles and stanine scores for the purpose of computing the Motor Ability Index (MAI). These processes will be described in Chapter Three – Assessment Procedures.

Table 2-5 provides the Motor Ability Test Form with hypothetical scores so that the reader can review the scoring procedure.

TABLE 2-5

MOTOR ABILITY TEST FORM, Ages 5-7

NAME Doe (Last) John (First) 6 (Age) 1 (Grade) Northeast (School) M (Sex)
HANDEDNESS: R X L ___
FOOTEDNESS: R X L ___
CLASSROOM TEACHER Mrs. Smith
DATE 9/2/74 WEIGHT 45
HEIGHT 48"

			PRE-TEST				POST-TEST			
TEST ITEM	ATT.	FACTOR MEASURED	TRIALS	RS	%	S	TRIALS	RS	%	S
1 Walk	2	Gross Body Coord.	++	2						
2 Creep	2	Gross Body Coord.	+0	1						
3 Climb stairs	2	Gross Body Coord.	++	2						
4 Skip	2	Gross Body Coord.	+0	1						
5 March-in-place	2	Gross Body Coord.	+0	1						
TOTAL (Maximum–10 Points)				7	20	4				
1 Stand–both feet (15 sec.)	3	Bal-Post. Orient.	0+0	1						
2 Stand–right foot (15 sec.)	3	Bal-Post. Orient.	+00	1						
3 Stand–left foot (15 sec.)	3	Bal-Post. Orient.	00+	1						
4 Jump–one foot leading	3	Bal-Post. Orient.	0++	2						
5 Jump–both feet simultaneously	3	Bal-Post. Orient.	0+0	1						
6 Jump–both feet	3	Bal-Post. Orient.	+00	1						
7 Hop–right foot	3	Bal-Post. Orient.	00+	1						
8 Hop–left foot	3	Bal-Post. Orient.	00+	1						
TOTAL (Maximum–24 Points)				9	10	3				
1 Catch	3	Eye-hand Coord.	0++	2						
2 Ball–bounce and catch	3	Eye-hand Coord.	+0+	2						
3 Touch ball swg. laterally	3	Eye-hand Coord.	+++	3						
4 Touch ball swg. fore/aft	3	Eye-hand Coord.	+++	3						
5 Bat ball with hand	3	Eye-hand Coord.	0++	2						
6 Bat ball with bat	3	Eye-hand Coord.	0+0	1						
TOTAL (Maximum–18 Points)				13	50	5				
1 Throw–right hand	3	Eye-hand Accuracy	0-3-3	6						
2 Throw–left hand	3	Eye-hand Accuracy	1-1-1	3						
TOTAL–Maximum–18 Points)				9	80	7				
1 Kick–right foot	3	Eye-foot Accuracy	0-2-1	3						
2 Kick–left foot	3	Eye-foot Accuracy	2-0-0	2						
TOTAL (Maximum–18 Points)				5	50	5				
GRAND TOTAL (Stanine Points)						24				
MOTOR ABILITY INDEX						48				

ANECDOTAL REMARKS:
Difficulty with bilateral movements. Balancing problems – may be attributable to inability to align parts in accordance with principles of center of gravity. Fearful of height. Eye-foot accuracy needs work.

Symbols

RS = raw score
% = percentile score
S = Stanine score
+ = passed
0 = failed

(Source: Hilsendager, D.R., H.K. Jack and Lester Mann, *Basic Motor Fitness Test for Emotionally Disturbed and Mentally Handicapped Children: Preliminary Report*. National Institute of Mental Health. Grant Number 1-TL-MH-8543-1, 5. 19[illegible].)

Motor Ability Test, Ages 8-11[1]

Administration. This motor ability instrument is similar in format (i.e., factors measured) to the battery for ages 5-7 except that the test items are more difficult to perform. Consequently, the battery should be administered to those students who attain superior performance scores on the K-2 instrument.

Test directions. The tester should observe student performance carefully and record anecdotal remarks for all atypical patterns so that an individualized program can be prescribed.

A. GROSS BODY COORDINATION

Test Item No. 1: *Modified Cable Jump*[2]
Factor: Gross Body Coordination
The subject holds a two-foot length of rope in front of him with both hands and attempts to jump through the rope. 5 attempts with the rope in front of the body and 5 attempts with the rope behind the body. (Fig. 2-56). An unsuccessful attempt is recorded if the subject: does not have some part of the rope exposed to view on the outer side of each hand; does not retain the same grasp at the termination of the jump; or falls during the performance of the jump. Two practice attempts shall be permitted (one from the forward position and one from the rear position).
Attempts: 10
Scoring: Pass or Fail; maximum of ten points

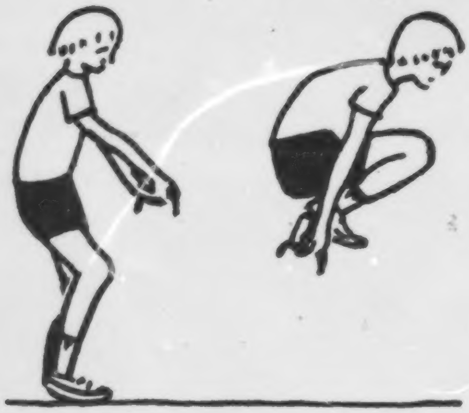


Fig. 2-56 Cable Jump, Forward/Rearward

B. BALANCE-POSTURAL ORIENTATION

Test Item No. 1: *Walk, Tapered Balance Beam*[3]
Factor: Static/Dynamic Balance
The student is to traverse the beam in a heel to toe manner (gym shoes or shoes) by alternately placing the right foot in front of and touching the left foot and vice versa. The subject may be assisted up on the beam initially, but *no further assistance is permitted.* The attempt is terminated if the subject: touches either foot to the floor; does not walk in a heel-toe fashion (i.e., touching the heel of the front foot to the toe of back foot); or traverses the beam in any other manner. One practice attempt shall be permitted. When recording, give credit for the distance achieved, i.e., the subject must touch or step beyond the line to get credit for the distance (see illustration). The score to be recorded is the front of the toe of the foot that was last placed properly on the beam.
Attempts: 2
Scoring: Record the average score of the two attempts (in inches)

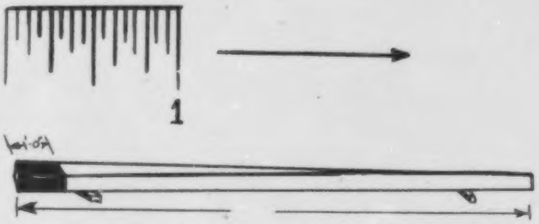


Fig. 2-57 Tapered Balance Beam
(See Appendix G for complete beam construction specifications.)

C. EYE-HAND COORDINATION

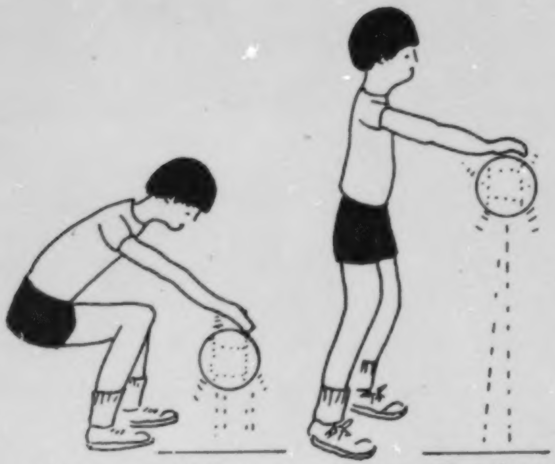
Test Item No. 1: *Ball-Bouncing, Right Hand*
Factor: Eye-Hand Coordination
The subject is to bounce an 8½" playground ball continuously, with the right hand, for thirty seconds. Any method of bouncing the ball is acceptable as long as the ball is not touched until it reaches at least hip level height. (Refer to Fig. 2-58 for proper dribbling position.) If the subject exceeds the bending limit, stop the performance and repeat. If the subject loses control of the ball, discontinue counting until he starts to bounce the ball again. One practice attempt shall be permitted.
Attempts: 2
Scoring: Record the average score of the two attempts

---

[1] Township of Ocean School District Motor Ability percentile and stanine scores are located in Appendix P.

[2] Modified version of cable jump test designed by Edwin A. Fleishman, *The Structure & Measurement of Physical Fitness* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964), pp. 169-170.

[3] Modified version of tapered balance beam designed by Donald Hilsendager, H.P.E.R. Dept., Temple University, Philadelphia, Pa.



a. Improper Technique b. Proper Technique

Fig. 2-58 Dribbling Procedures

Test Item No. 2: *Ball-Bouncing, Left Hand*
Factor: Eye-Hand Coordination
The same procedure as for test item No. 1 except that the subject bounces the ball with his left hand.
Attempts: 2
Scoring: Record the average score of the two attempts
Total Eye-Hand Coordination Score: Record the average of the two scores (right and left hand)

D. EYE-HAND ACCURACY

Test Item No. 1: *Throw, Right Hand*
Factor: Eye-Hand Accuracy
The subject throws a whiffleball (softball circumference) at a modified version of the Johnson Target Test. The subject may use either an overhand or underhand throwing motion; the throwing distance is fifteen feet. The ball must hit the target without previously touching the floor for a correct attempt. Scoring: 3 points inner rectangle and line; 2 points middle rectangle and line; 1 point, outer rectangle and line.

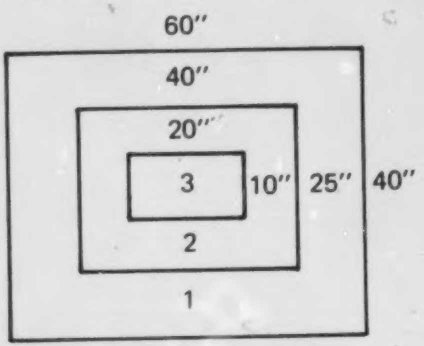


Fig. 2-59 Johnson Target Test

Attempts: 3
Scoring: Total points for three attempts

Test Item No. 2: *Throw, Left Hand*
Factor: Eye-Hand Accuracy
Same procedure as test item No. 1 except that subject throws with the left hand.
Attempts: 3
Scoring: Total points for three attempts)
(**Note:** Subject's composite score on eye-hand accuracy is the total number of points in six attempts.)

E. EYE-FOOT ACCURACY

Test Item No. 1: *Kick, Right Foot*
Factor: Eye-Foot Accuracy
The subject kicks stationary volleyball at the target with his right foot; the ball *may not* touch the floor prior to contacting the target for a valid attempt (target distance, *15 feet).* Scoring: 3 points, inner rectangle and line; 2 points middle rectangle and line; 1 point, outer rectangle and line.
Attempts: 3
Scoring: Total points for three attempts

Test Item No. 2: *Kick, Left Foot*
Factor: Eye-Foot Accuracy
Same procedure as test item No. 1 except the subject kicks the stationary volleyball with his left foot.
Attempts: 3
Scoring: Total points for three attempts
(**Note:** Subject's composite score on eye-foot accuracy is the total number of points scored in six attempts.)

Test scoring. Conform to the scoring procedures explained in the test directions. Record scores on Table 2-6. Appendix H provides a sample form for recording the scores for an entire class. Appendix P provides percentile and stanine norms based on the Township of Ocean School District's student population.

PERCEPTUAL-MOTOR SCREENING INSTRUMENT

It is common practice for students with perceptual-motor problems to be referred for remediation to the Adapted Physical Education Program. The question is, "How does the physical educator ascertain the deficiencies so that he can prescribe intelligently?" If the child is referred for a visuo-motor problem, is it a visual problem, a motor problem, or an integrative problem?

TABLE 2-6

MOTOR ABILITY TEST FORM, Ages 8-11

Name: ______________________ School: ________________ Sex: __________

Age: ______ IQ: ______ Mental Age: ______ Classification: ______ Somatotype: ______________

Date: ______________ Classroom Teacher: ____________________ Total Score: ______________

Test Item	Attempts	Factor	PRE-TEST			POST-TEST		
			Raw Score	%ile	Stanine	Score	%ile	Stanine
1. Cable Jump[1]	10	Gross Body Coordination						
Stanine Sub-Total								
1. Walk Tapered Beam[2]	2	Balance/Postural Orientation						
Stanine Sub-Total								
1. Ball-Bouncing, Right Hand	2	Eye/Hand Coordination						
2. Ball-Bouncing, Left Hand	2	Eye/Hand Coordination						
Percentile/Stanine Sub-Total								
1. Throw, Right Hand	3	Eye/Hand Accuracy						
2. Throw, Left Hand	3	Eye/Hand Accuracy						
Percentile/Stanine Sub-Total								
1. Kick, Right Foot	3	Eye/Foot Accuracy						
2. Kick, Left Foot	3	Eye/Foot Accuracy						
Percentile/Stanine Sub-Total								
Total Stanine Points								
MOTOR ABILITY INDEX $\frac{\text{Total stanine points} \times 10}{5}$ = MAI								

ANECDOTAL REMARKS

____

____

____

____

____

---

[1] Modified version of cable jump test designed by Edwin A. Fleishman, *The Structure & Measurement of Physical Fitness* (Englewood Cliffs, N.J.: Prentice-Hall Inc., 1964), pp. 169-170.

[2] Modified version of tapered balance beam designed by Donald Hilsendager, H.P.E.R. Department, Temple University, Philadelphia, Pa.

Getman[1] clarifies the problem somewhat by defining perceptual-movement in operational terms. He maintains perceptual-movement involves the simultaneous impingement of two or more "information systems" on the learner (one of which is movement) in which the decision-making process is involved. While the definition aids one in identifying the component parts of the term "perceptual-motor," it does not provide the teacher with a procedure for individualizing instruction. Vodola[2] has developed a perceptual-motor (PM) prototype which can be used to ascertain whether the problem relates to input, integration, or output. The screening instrument comprises two main decision-making tasks:

1. The performance of a single PM task (i.e., the integration of one information system with a motor act).
2. The performance of a complex PM task (i.e., the integration of two or more information systems with a motor act). These tasks have been further subdivided to provide the screener with some insight as to whether the problem relates to a perceptual, motor, or integrative aberration.

Administration

It is recommended that the battery be administered to those students who are referred by the Special Services Department as exhibiting perceptual and perceptual-motor (PM) problems. Particular attention should be given to those children classified as neurologically impaired, perceptually impaired, and/or learning disabled.

Test Directions[3]

1. Check the medical records of all pupils who are to be screened to insure that any audio or visual problems have been corrected.
2. Pupil performance should always be prefaced by a demonstration by the teacher.
3. The teacher should observe student performance carefully and record anecdotal remarks for all failures.

Item No. 1: *Perceptual-motor task, audio-motor integration*
Factor: Integration of One Perceptual Task with a Motor Task
The teacher produces a loud sound and a soft sound with cymbals, a tom-tom, or other sound-producing device. The teacher demonstrates the task by hopping on the left foot for the loud sound and on the right foot for the soft sound. The student is requested to listen, observe and replicate the task (i.e., listen to the loud and soft sounds and integrate the sounds with the required motor responses smoothly and efficiently). If the subject integrates the perceptual and motor responses properly, proceed to test item No. 5; if not then, proceed to test item No. 2.
Attempts: 1 Score: Pass or fail

Item No. 2: *Motor task, hopping*
Factor: Balance-Postural Orientation
The subject is to hop on left foot, right foot, and alternate feet on command. If the subject performs all aspects of the hopping task correctly, proceed to test item No. 3; if not, he is to receive prescriptive activities to resolve the problem.
Attempts: 1 Score: Pass or fail

Item No. 3: *Perceptual task, sound discrimination*
Factor: Auditory Association and Meaning
The subject is to listen to, and verbally discriminate between, loud and soft sounds emanating from cymbals, a tom-tom, or other sound-producing device. If the performance is satisfactory, proceed to item no. 4; if not, the subject is to be prescribed activities to resolve the problem.
Attempts: 1 Score: Pass or fail

Item No. 4: *Perceptual-motor matching, audio-motor task*
Factor: Integrating Audio-Motor Task
The subject is to "match" the tasks presented in test items No. 2 and No. 3. If the performance is satisfactorily integrated, proceed to test item no. 5; if not, the subject is to be programmed for other similar "matching" tasks.
Attempts: 1 Score: Pass or fail

Item No. 5: *Complex perceptual-motor task, audio-visuo-motor integration*
Factor: Integrating Two Perceptual Tasks with a Motor Task
The teacher produces a series of loud and soft sounds with cymbals, a tom-tom, or other sound-producing device. The teacher then demonstrates the task by hopping into a large circle with the left foot when he makes a loud sound and into a small circle with the right foot when he makes a soft sound. The subject is requested to listen, observe, and replicate the task. (See Figure 2-60.) If the task is performed correctly, proceed to test item no. 6 for perceptual-motor tasks that involve higher levels of cognition. If the subject cannot integrate the task properly, prescribe tasks to resolve the problem(s). Assess visual discrimination.
Attempts: 1 Score: Pass or fail

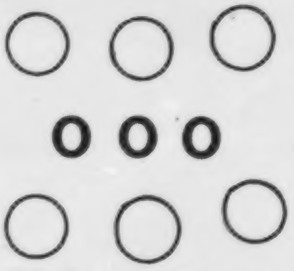


Fig. 2-60 Perceptual-Motor Task

---

[1] G.N. Getman, "Lecture: Perceptual-Movement Programming."

[2] Thomas M. Vodola, "Perceptual-Motor Model: A Diagnostic and Prescriptive Approach."

[3] Appendix K provides a checklist for identifying potential perceptual-motor problems.

Item No. 6: *Motor-academic task, hopping on numerals*
Factor: Motor-Numeral Integration
The subject is requested to: (1) hop on numerals for identification purposes; (2) hop and perform addition tasks; (3) hop and perform subtraction tasks; and (4) hop and perform division tasks. (Refer to Figure 2-61.)
Attempts: 1 Score: Pass or fail

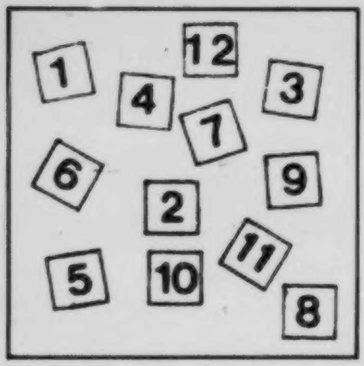


Fig. 2-61 Hopping on Numerals

Item No. 7: *Motor-academic task, hopping on letters*
Factor: Motor-Letter Integration
The subject is requested to: (1) hop on letters for identification purposes; (2) hop and spell his name; and (3) hop and spell words that are part of a prescribed word list. (Refer to Figure 2-62.)
Attempts: 1 Score: Pass or fail

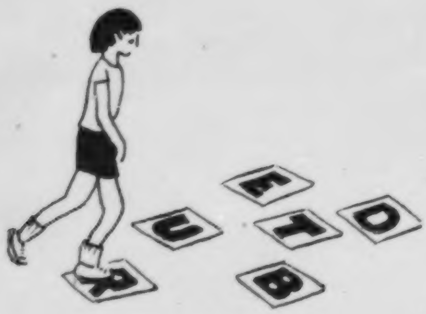


Fig. 2-62 Hopping on Letters

Test scoring. The Perceptual-Motor Screening Instrument provides the reader with a model for assessing a pupil's perceptual-motor performance. The purpose of the instrument is to provide a series of sequential tasks that will aid the teacher in discovering whether the subject has a perceptual, motor or perceptual-motor integration problem.

Table 2-7 provides a form for scoring pupil performance. Although a place has been provided for recording "pass" or "fail" scores, the instrument is not a test, but rather a screening device. As such, its primary value is to aid the teacher in gathering process information; thus, after each task a place has been provided for the recording of anecdotal remarks. The screener should observe student performance carefully and record those cases of improper performance, with specific comments as to how the task was performed.

SUMMARY

A variety of motor ability instruments and a perceptual-motor screening prototype have been presented to provide the teacher with those tools necessary to gather baseline information on any of the exceptional population that are ambulatory. Specifically, the formal and informal batteries provide the teacher with the capability of assessing the performance of:

1. the prekindergarten child – mentally retarded, learning disabled, normal, and gifted
2. the primary and intermediate grade child – mentally retarded, learning disabled, normal, and gifted
3. the institutionalized resident – mentally retarded
4. other handicapped individuals by modifying or selecting those items that are appropriate

A word of caution: Although the instruments have been categorized and recommended for use with certain populations, the final decision as to what instrument to administer must be made by the teacher. The recommended "rule of thumb" is:

1. Experiment with items from several batteries to determine the child's developmental level.
2. Administer the battery deemed appropriate. (When in doubt, administer the less-demanding test to insure success.

TABLE 2-7

PERCEPTUAL-MOTOR SCREENING INSTRUMENT[1]

NAME	Doe	John	6	1	M	Northeast
	Last	First	Age	Grade	Sex	School

SCREENER Mr. Roy Lipoti CLASSROOM TEACHER Miss Elizabeth Brown

AUDIOMETRIC TESTING 9/5/74 (Date) VISUAL TESTING 9/6/74 (Date)

ITEM No. 1 AUDIO-MOTOR INTEGRATION Pass ____ Fail 0 (1)
(Integration of Sound and Hopping)
Anecdotal Remarks: Inability to discern left foot from right foot.

ITEM No. 2 MOTOR TASK Pass ____ Fail 0
(Hopping, Left and Right Foot)
Anecdotal Remarks: Hops on one foot only. Difficulty in shifting weight and balancing.
Re-administer on 10/1/74.

ITEM No. 3 PERCEPTUAL TASK Pass + Fail ____
(Sound Discrimination)
Anecdotal Remarks:

ITEM No. 4 AUDIO-MOTOR MATCHING Pass + Fail ____
(Matching Sound and Hopping)
Anecdotal Remarks: Administered 10/2/74.

ITEM No. 5 AUDIO-VISUO-MOTOR INTEGRATION Pass + Fail ____
(Integration of Sounds, Sight and Hopping)
Anecdotal Remarks: Administered 10/2/74.

ITEM No. 6 MOTOR-ACADEMIC TASKS Pass ____ Fail 0
(Hopping, Letters and Numerals Integration)
Anecdotal Remarks: Can add small numerals. Cannot subtract.
Cannot spell own name. 10/3/74.

ITEM No. 7 TEACHER SUMMARY REPORT

A. Observations
1. Laterality problem
2. Hopping, shifting, balance
3. Subtraction, spelling.

B. Recommended Activities
Jump in place and off bench:
hop in place, L and R foot:
Balance both feet L and R foot.
Sequence into more difficult
tasks.

---

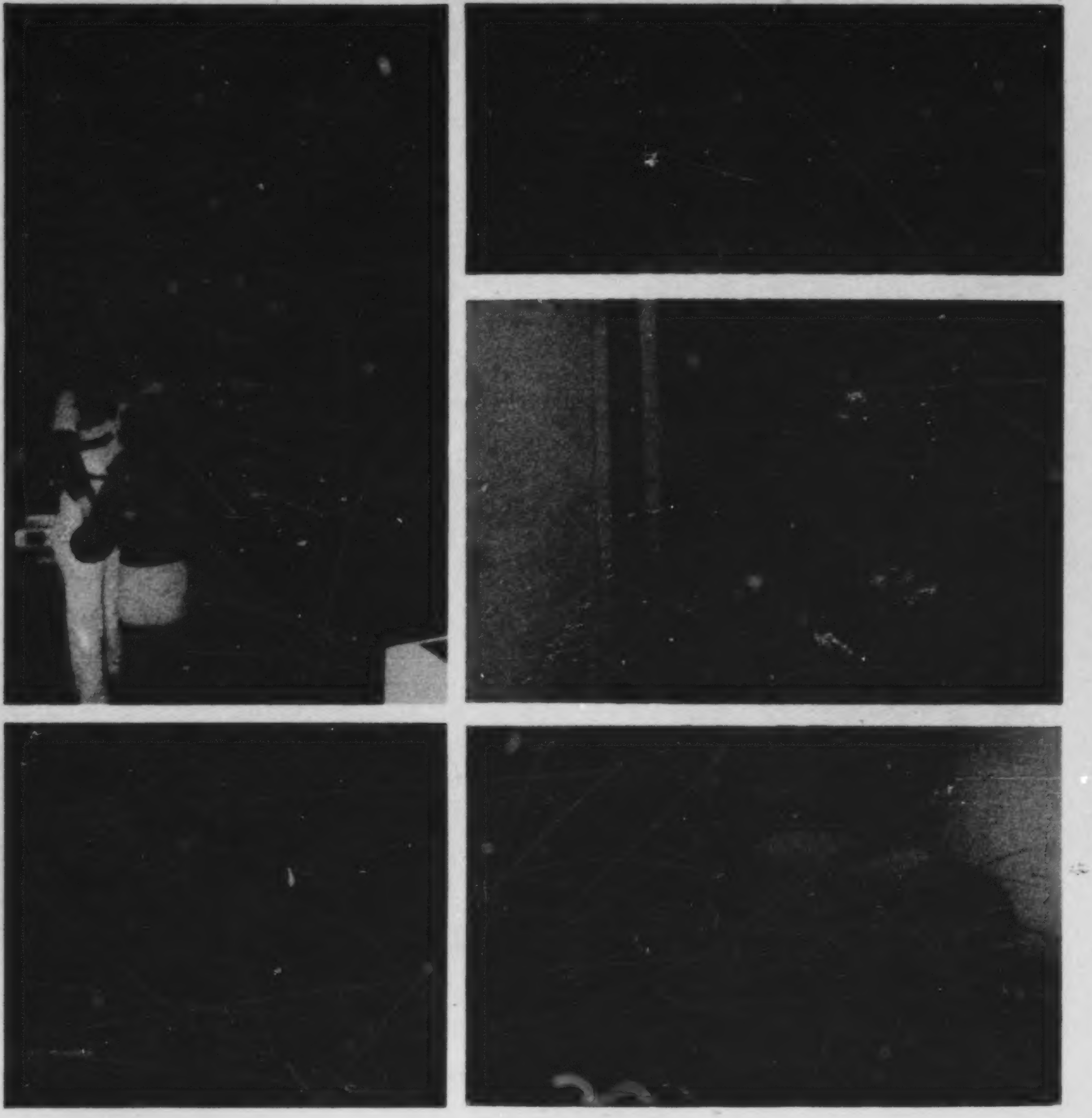
[1] Courtesy of the Township of Ocean School District.

T

ASSESSMENT PROCEDURES

P

E



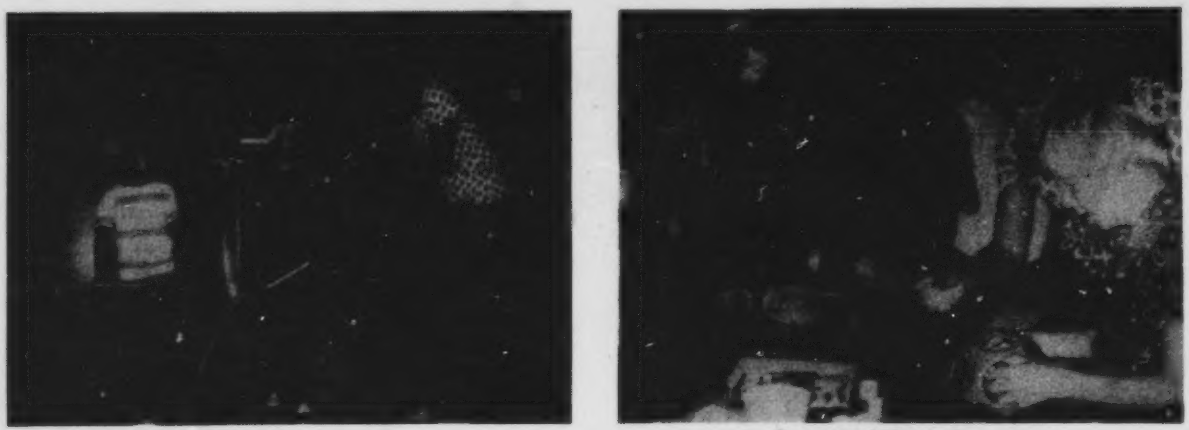
CHAPTER THREE

T
ASSESSMENT PROCEDURES
P
E

The second step in the individualization of a motor and perceptual-motor activity program is the proper assessment of student performance. Pupil performance must be properly diagnosed to determine individual strengths and weaknesses. (Those factors which should be included in the assessment process are presented in Figure 3-2 on page 44.

Unfortunately, a major weakness of many teacher training programs is that teachers are taught to diagnose performance almost solely on the basis of "product" information (test scores). Teachers are seldom provided the skills necessary to procure "process" information (i.e., how the child performs the specific task).

The Project ACTIVE Teacher Training Program incorporates both appraisal strategies – objective and subjective. Teachers have been trained to assess "product" and "process" information so that they can compile a complete "picture" of each child's performance. Each practicum experience is structured to develop the observational powers of the participants. The following pages provide a systematic procedure for assessing pupil progress efficiently.



a. Motor Assessment

b. Perceptual-Motor Assessment

Fig. 3-1 Teacher Assessment of Pupil Performance
(Mini-Training Program, Atlantic County Association for Children with Learning Disabilities, N.J.)

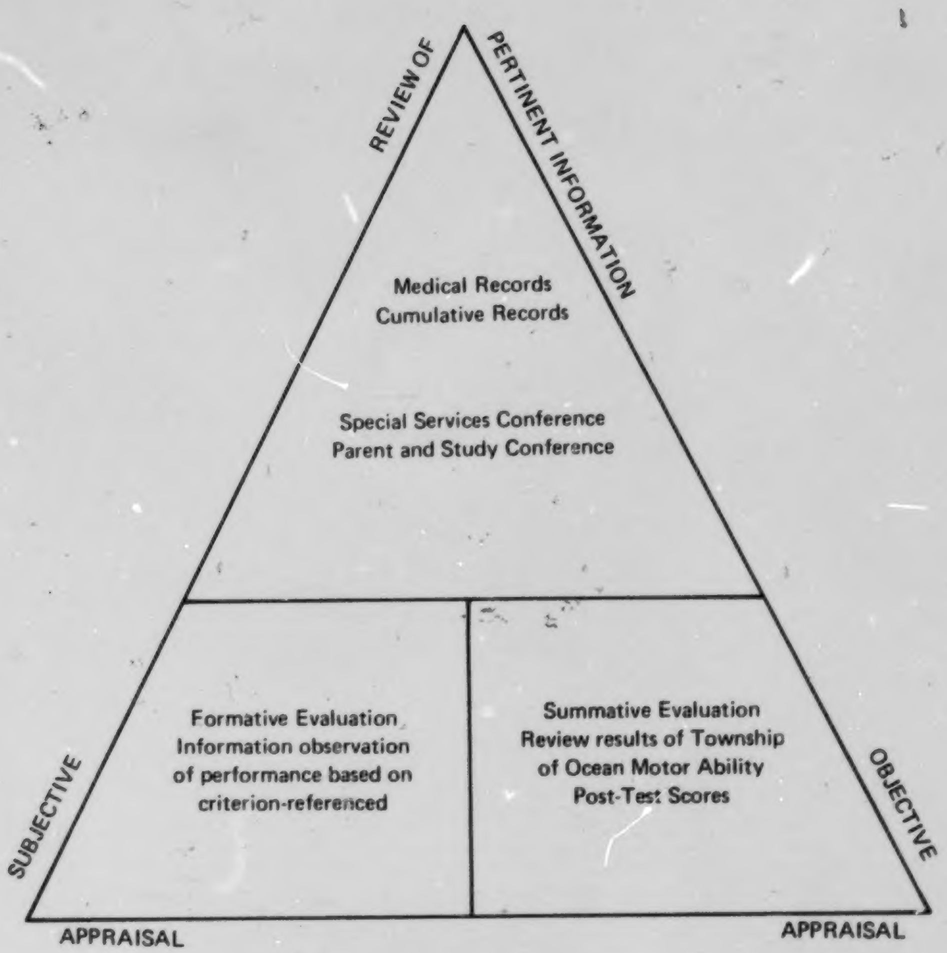

REVIEW OF
PERTINENT INFORMATION
Medical Records
Cumulative Records
Special Services Conference
Parent and Study Conference
Formative Evaluation
Information observation
of performance based on
criterion-referenced
Summative Evaluation
Review results of Township
of Ocean Motor Ability
Post-Test Scores
SUBJECTIVE
APPRAISAL
OBJECTIVE
APPRAISAL

Fig. 3-2
Assessment Variables

OBJECTIVE APPRAISAL, MOTOR PERFORMANCE

Chapter Two described how to administer the Prekindergarten Screening Tests, the Motor Ability Tests and the Perceptual-Motor Screening Instrument. Using the raw scores and anecdotal remarks provided for the pupil in Tables 2-5 and 2-7 on pages 36 and 42, we can now establish a sequential procedure for converting the information into a meaningful appraisal.

Conversion of raw scores to percentile scores. To assess an individual's performance or to compare his performance with other individuals on the basis of raw test scores, a mathematically sound procedure must be devised. Vodola[1] devised a procedure whereby teachers can attain the following competencies:

- Convert Raw Scores to Percentile Scores via a Table of Numbers. Any number of scores can be converted to percentiles in a matter of *minutes*. Permits student comparisons on the same test.
- Convert Percentile to Normalized Standard Scores. A matter of *seconds* to convert percentiles to standard scores. Permits student comparisons on different test items or test batteries.
- Individualize Student Instruction:
  - Develop student profile charts for parental reports.
  - Grade students on an individualized basis, i.e., on the basis of achievement or improvement.
  - Group students for instructional purposes on the basis of varying abilities.

The mathematical computations in the following "steps" were achieved by utilizing sections of the manual dealing with the conversion of raw scores to percentile and stanine scores.

Step No. 1: Check the raw scores for each factor.

1. Gross Body Coordination	7
2. Balance-Postural Orientation	9
3. Eye-Hand Coordination	13
4. Eye-Hand Accuracy	9
5. Eye-Foot Accuracy	5

Step No. 2:
Identify the percentile score for each raw score by referring to Table 3-1 on page 46. Your results should be as follows:

Factor	Raw Score	Percentile
1. Gross Body Coordination	7	20
2. Balance-Postural Orientation	9	10
3. Eye-Hand Coordination	13	50
4. Eye-Hand Accuracy	9	80
5. Eye-Foot Accuracy	5	50

Explanation: The norms in Table 3-1 were based on the scores of pupils in kindergarten to ensure a reasonable range for all percentiles.[2] It should be remembered that the instrument is only appropriate for use with normal children in kindergarten through the second grade, or for children with definite motoric problems. It is recommended that districts establish their own norms. (Appendix 1 provides the details, tables of numbers, and tally sheet so that the reader can establish the norms for his school district without the need for any mathematical background.[3]

Assessing Student Performance

Conversion of percentile scores to stanine scores.

Step No. 1:
Identify the stanine scores for each factor by referring to Table 3-1 on page 46. Your results should be as follows:

Explanation:

Factor	Raw Score	Percentile	Stanine
1. Gross Body Coordination	7	20	4
2. Balance-Postural Orientation	9	10	3
3. Eye-Hand Coordination	13	50	5
4. Eye-Hand Accuracy	9	80	7
5. Eye-Foot Accuracy	5	50	5

Explanation: Percentile norms provide a basis for assessing a student's status in relation to the number of subjects that were tested. Thus, the gross body coordination percentile score of "20" indicates that the subject tested scored better than 20 per cent of the population that took the test. Percentile scores are not additive or divisible because each score is not based on a common denominator – thus the recommended use of stanine scores. Stanine scores, normalized standard scores of nine units, permit one to compare scores for each factor; add all scores; and then divide to obtain an average score. (Stanine scores are not "true" standard scores, but if the stanines are based on a normal distribution of raw scores, they can be used with reasonable accuracy.)

---

[1] Thomas M. Vodola, *Descriptive Statistics Made Easy for the Classroom Teacher*, pp. 1-11.

[2] Appendix I provides motor ability norms for students in New Jersey.

[3] The Tables in Appendix 1 are included in a manual published by the Project Director, *Descriptive Statistics Made Easy for the Classroom Teacher*. For additional information, contact: Dr. Thomas M. Vodola, P.O. Box 93, Neptune City, N.J. 07753.

TABLE 3-1

KINDERGARTEN MOTOR ABILITY TEST NORMS[1]

	Gross Body Coordination	Balance Postural Orientation	Eye and Hand Coordination	Eye and Hand Accuracy	Eye and Foot Accuracy		
Number of Pupils Tested–	234	244	249	262	258		
	RAW SCORES	RAW SCORES	RAW SCORES	RAW SCORES	RAW SCORES	PERCENTILE	STANINE
	10	24	18	16	15	99	9
	10	23	17	12	9	96	8
	10	21	16	10	7	90	8
	10	20	15	9	6	80	7
	10	19	15	9	6	75	6
	10	19	14	8	6	70	6
	9	18	14	8	6	65	6
	9	17	14	8	6	60	5
	8	16	13	7	5	50	5
	8	15	12	6	5	40	5
	8	14	12	6	4	35	5
	8	14	12	5	4	30	4
	8	13	11	5	4	25	4
	7	12	10	4	4	20	4
	6	9	8	2	3	10	3
	6	6	7	1	2	4	2
	4	3	4	0	0	1	1

MOTOR ABILITY INDEX CONVERSION CHART (MAI)

Composite Index	MAI	Composite Index	MAI	Composite Index	MAI	Composite Index	MAI
5	10	15	30	25	50	35	70
6	12	16	32	26	52	36	72
7	14	17	34	27	54	37	74
8	16	18	36	28	56	38	76
9	18	19	38	29	58	39	78
10	20	20	40	30	60	40	80
11	22	21	42	31	62	41	82
12	24	22	44	32	64	42	84
13	26	23	46	33	66	43	86
14	28	24	48	34	68	44	88
						45	90

Note: When the test contains five factors, one need only "double" the composite stanine score to determine the index score (in the example 24 x 2 = 48).

---

[1] Courtesy of the Township of Ocean School District.

Fig. 3-3 Trainee Practicum Experience: Converting Raw Data to Normalized Standard Scores
(Joseph Habershaw, ACTIVE Turn-Key Trainer, Rhode Island)

Plotting profile chart.

Step No. 1:

Plot the stanine scores for each factor. Table 3-2 provides a profile of the stanine scores based on the original data. (Provision also has been made for plotting physical fitness scores.)

Explanation: The profile chart technique provides a highly visible means of comparing a student's relative strengths and weaknesses in terms of the factors being measured for any test battery. Further, by plotting pre- and post-test scores, the teacher can obtain progress information relative to each factor. (Stanine scores are expressed as unit scores "1" through "9." However, zeroes (0) have been added in the profile chart because they have been found to make the scores more interpretable to parents.)

Computing motor ability index (MAI)[1]

Step No. 1:

Internalization of the concept: Add the stanine scores for each test factor. Total all stanine scores.

$$\begin{array}{r} 4 \\ 3 \\ 5 \\ 7 \\ \underline{5} \\ 24 \end{array}$$

Step No. 2:

Multiply the total by ten. 24 x 10 = 240

Divide the result by the number of test factors.

$$\begin{array}{r} 48 \\ 5\overline{)240} \end{array}$$

Step No. 1:

Short method: Add all stanine scores together (24).

Step No. 2:

Refer to the Motor Ability Index Conversion Chart, p. 46.

Step No. 3:

Locate the number "24" in the second composite stanine column from the left; the number to the right, "48," is the Motor Ability Index (MAI) score.

Explanation: While individual stanine scores are of more value to the teacher in presenting vital information for prescriptive purposes, there is also a need for one score which reflects a child's performance on the total test battery. The Motor Ability Index serves that function; it provides a score which can be used to determine whether a student should be scheduled in an enrichment program. It also provides a baseline score which can be used later for evaluative purposes. (This should clarify the student behavioral objective in Chapter One. It states that a student shall be released from the developmental program if he attains an MAI of 50, with no single component score of less than 4. The Township of Ocean School District recommends that pupils be scheduled for enrichment activities if they have a pre-test MAI score of 40 or below, and/or a single component stanine score of 2 or below. The recommended scheduling scores are not arbitrary, but are based on the fact that these "cut-off" points include the bottom 10 percent of the student population in the district, characterized by the term "Low Motor Ability.")

SUBJECTIVE APPRAISAL MOTOR AND PERCEPTUAL-MOTOR PERFORMANCE

Extreme caution must be exercised when using normative data for prescribing instructional programs because of these factors: an awareness that children are individuals with different developmental needs that cannot be truly reflected in any table of norms; normative data only provides summative information: (i.e., product, or after-the-fact-information); the potential error inherent in the administration of any test; and the limitations of any test instrument (i.e., the information provided is limited by the factors being assessed.)

In order to ensure maximum development of each child's motor performance capabilities, it is recommended that "process" information be continually assessed so that prescriptive programs can be modified according to varying developmental needs.

a. Motor Assessment

b. Ocular Pursuit

Fig. 3-4 Subjective Assessment of Pupil Performance
(ACTIVE Cadre Team Workshop, Monmouth College, West Long Branch, N.J.)

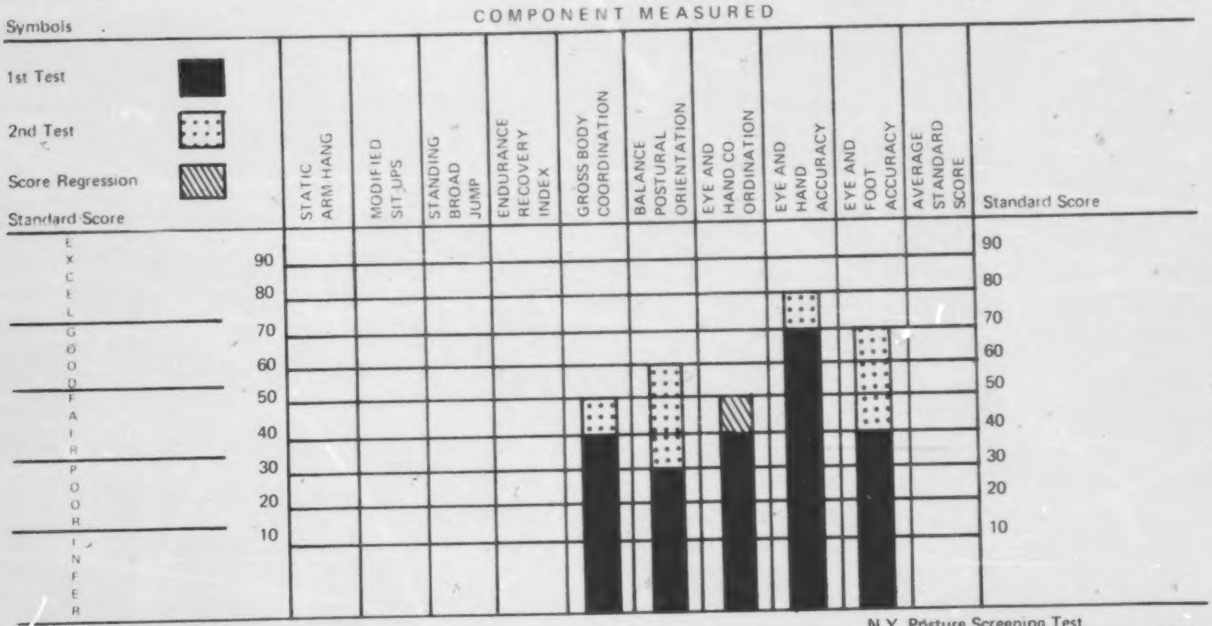
---

[1] Edwin A. Fleishman, *The Structure and Measurement of Physical Fitness*, pp. 141-142.

TABLE 3-2

PHYSICAL FITNESS AND MOTOR ABILITY PROGRESS PROFILE[1]

STUDENT'S NAME Doe (Last) John (First) AGE 6 CLASSIFICATION Low Motor Ability SCHOOL Northeast



ANECDOTAL REMARKS
Difficulty with bilateral movements. Rigid gross body movements. Balancing problem. Fearful of height. Balancing problem may be attributable to inability to align body parts in accordance with principles of center of gravity. Eye and foot accuracy needs work.

N.Y. Posture Screening Test ___ ___
Asthmatic (Vital Capacity) ___ ___
Weight Control (lbs.) ___ ___
Orthopedic (See Anecdotal Remarks) ___ ___

Determining developmental level. Maturational readiness should be considered when one assesses the motor performance of a child. For example, if a child cannot walk on a beam at age 3, is it indicative of a balance problem or simply that, generally speaking, children of that age do not possess the motor development prerequisites necessary to achieve the task? Sinclair[2] contends that beam-walking (4" surface) is a basic pattern that is exhibited by children at age 4. Thus, while one may use beam-walking as an assessment item for children younger than that age, the inability to perform the task should not be recorded as a "failure."

Table 3-3 lists basic motor skills and the ages at which success and basic patterns may be expected.[3] It is recommended that the contents of the table be reviewed prior to assessment of the motor performance of children in prekindergarten and primary grades.

Recording process information, motor ability test. Refer back to Tables 2-1, 2-5, and 3-2 on pages 9, 36, and 42, respectively. On each form, a place has been provided to record summary or anecdotal remarks. An example will highlight the importance of observing a child's performance carefully:

On the Eye-Hand and Eye-Foot Accuracy Tests (Table 2-5), John achieved percentile scores of "80" and "50," respectively. Thus, one could conclude he performed reasonably well on these tasks, as he scored as well as, or better than, 80 per cent of the population on the first item, 50 per cent of the population on the second item. However, throughout the performance of all accuracy tests and other items involving bilateral coordination of body parts, the teacher observed that the child manifested a similar problem – the inability to coordinate the oppo-

---

[1] Courtesy of the Township of Ocean School District.

[2] Caroline B. Sinclair, *Movement of the Young Child: Ages Two to Six*, p. 29.

[3] Sinclair, *op cit.*, pp. 29-30.

TABLE 3-3

AGES OF SUCCESS AND BASIC PATTERN FOR MOTOR TASKS

Task	Age 2	Age 3	Age 4	Age 5	Age 6
Ascending stairs	S	S BP	S BP	S BP	S BP
Bouncing on board	S	S	S BP	S	
Bouncing large ball			S BP	S BP	S
Carrying	S BP	S BP	S BP	S BP	S BP
Catching	S	S	S		S
Climbing	S	S	S BP	S BP	S BP
Creeping	S BP	S BP	S BP	S BP	S BP
Descending stairs	S	S	S BP	S BP	S BP
Figure-8-run				S	S
Forward roll	S	S	S	S BP	S
Galloping	S	S	S BP	S BP	S BP
Hanging		S	S BP	S BP	S BP
Hitting	S	S	S	S	S
Hopping			S BP	S BP	S BP
Kicking	S	S	S	S BP	S
Pulling	S	S	S BP	S BP	S BP
Pushing	S	S BP	S BP	S BP	S BP
Running	S	S	S BP	S BP	S BP
Running high jump		S	S BP	S BP	S BP
Skipping			S	S	S BP
Slidding			S	S BP	S BP
Standing broad jump	S	S BP	S BP	S BP	S BP
Throwing	S	S	S	S BP	S BP
Walking	S	S BP	S BP	S BP	S BP
Walking the beam		S	S BP	S	S

LEGEND: S = SUCCESS BP = basic pattern. Elevation of the symbol indicates the age plus six months, for example, *success* is bouncing on a board at two-and-one-half.

site extremities of the body. For example, when requested to throw with the right hand, he also stepped with the right foot.

Developing the ability to assess pupil performance subjectively requires training designed specifically to cultivate the teacher's observational powers. One technique found to be successful in the Project ACTIVE Teacher Training Program is to pair two teachers with one child during the testing periods. Thus, one teacher can observe terminal behavior and record the raw score while the partner observes how the child performed the specific components of the test and records anecdotal remarks. After a period of time, the teachers reverse their assignments. At the end of each session, the teachers discuss the total performance of the child on each task.

Recording process information, perceptual-motor screening instrument. A review of John's performance on the perceptual-motor tasks (Table 2-7 on page 42) revealed he failed Item No. 1 – Audio-motor Integration. Thus, John evidenced the inability to integrate audio and motor tasks. Further screening revealed he performed the perceptual task properly, but had extreme difficulty with tasks involving laterality, hopping, balancing and shifting of body weight. (Subsequent testing, following the prescription of hopping activities, revealed that John passed all perceptual and motor items.) Thus, by using the deductive method (i.e., proceeding from the general to the specific) and carefully recording process information, the teacher establishes a firm basis for assessing each child's performance. (During all phases of the screening, the teacher should keep a record of the specific behavior patterns that are manifested by each child – particularly the mentally retarded (MR), or learning disabled (LD). While all MR and LD children do not reveal the same problems thus, the need for careful teacher observation, they generally will display one or more of the following psychological patterns:)[1]

- hyperactivity – the constant manifestation of excessive motor activity
- perseveration – the inability to cease voluntarily the performance of the same act repeatedly
- distractibility – the limited ability to concentrate on the task at hand due to distractions caused by external stimuli
- disassociation – the inability to integrate basic data into "meaningful wholes"

The following points should be considered when subjectively assessing the motor and perceptual-motor performance of pupils:

1. Observe *all* motor and perceptual-motor patterns carefully
2. Reduce each task to its simplest, discrete parts
3. Focus attention on *process* information as well as *product* information
4. Record anecdotal remarks regarding any atypical patterns manifested
5. Try to identify common problems, such as:
   a. Tense, restricted movements
   b. The inability to perform bilateral movements
   c. The inability to "track" an object smoothly
   d. The inability to coordinate eye and hand, and eye and foot movements
   e. The tendency to favor one side of the body when performing tasks
   f. The ability to perform discrete tasks, but the inability to integrate two or more tasks
   g. The inability to respond to a perceptual cue

One final note regarding the utilization of subjective appraisal techniques. An effective individualized instructional program requires the daily assessment and frequent modification of pupil tasks. The incorporation of subjective appraisal techniques in the overall assessment process provides a viable means of achieving that goal. (Refer to Appendix K for additional perceptual-motor "process" information).

(Active Adopter, Dumont School District, Dumont, N.J.)

---

[1] Thomas M. Vodola, Chapter 7, "Adapted Physical Education," in *Handbook on Learning Disabilities*, ed., Robert E. Weber, p. 145.

TAPE PRESCRIPTION PROCEDURES

CHAPTER FOUR

T
A
PRESCRIPTION PROCEDURES
E

Previous chapters have stressed the role that "testing" and "assessing" play in the process of individualizing instruction. Chapter Four shows the interrelationship between the diagnostic and prescriptive processes. (Figure 4-1 on page 52 highlights factors that should be considered when formulating a prescriptive program.)

IDENTIFICATION OF PRIORITY NEEDS

To prepare a prescriptive program for a pupil, it is necessary to review all previous information gathered, determine the amount of time that should be devoted to each indicated deficiency, and prescribe those tasks or activities that will remediate the deficiencies.

Review motor ability profile chart. A review of John's profile on page 48, Table 3-2, reveals the following stanine scores:

Gross Body Coordination	40
Balance-Postural Orientation	30
Eye-Hand Coordination	50
Eye-Hand Accuracy	70
Eye-Foot Accuracy	50

Further, the following anecdotal remarks were noted:

Difficulty with bilateral movement
Fear of height

From the above data it is obvious that John's weakest area is balance and postural orientation and his strongest area is eye and hand accuracy. In prescribing activities for John, it would seem logical that less time be devoted to his proficiencies than would be devoted to his deficiencies. Also, consideration should be given to prescribing activities suggested by the teacher's anecdotal remarks.

Given this information, is there a procedure for determining the amount of prescriptive time t[illegible]hould be applied to each area? Vodola[1] has developed a procedure for writing time prescriptions based on stanine scores. The sequential steps are detailed in the following section.

Convert motor ability stanine scores to time prescriptions.[2]
Step No. 1:
Plot all stanine scores on time prescription chart ("0's" have been added for easier interpretation by parents): Gross Body Coordination *40;* Balance-Postural Orientation *30;* Eye-Hand Coordination *50;* Eye-Hand Accuracy *70;* Eye-Foot Accuracy *50.* (Refer to Table 4-1.)

---

[1] Thomas M. Vodola, "The Effects of Participation Time Variations on the Development of Physical Fitness, Motor Skills and Attitudes," p. 170.

[2] As of September 1974, school districts and agencies in New Jersey implementing the Project ACTIVE Motor Ability Program have been provided a computerized printout of time prescriptions and recommended tasks and activities. Time prescriptions require the amount of instructional time (in minutes) and the stanine scores for each factor. (See Appendix O for time prescription directions and forms.)

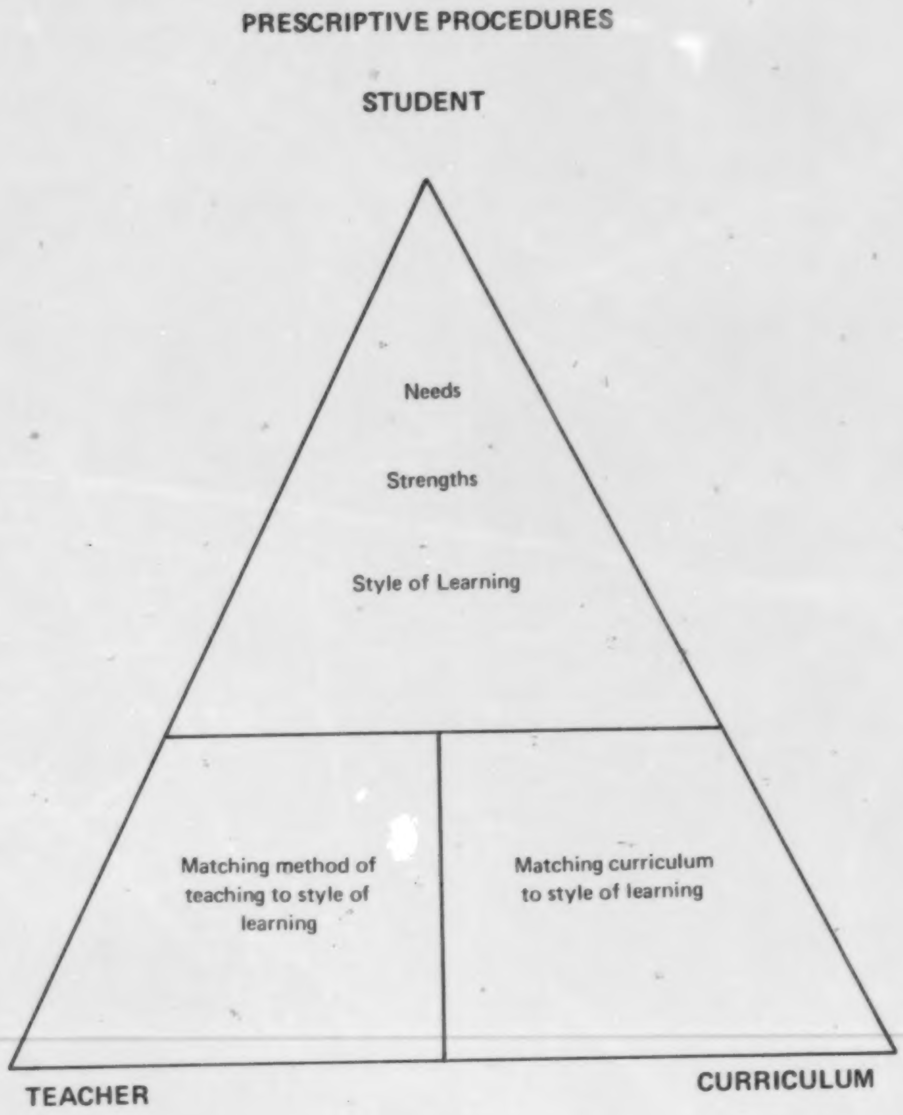

PRESCRIPTIVE PROCEDURES
STUDENT
Needs
Strengths
Style of Learning
Matching method of teaching to style of learning
Matching curriculum to style of learning
TEACHER
CURRICULUM

Fig. 4-1 Prescriptive Variables

TABLE 4-1

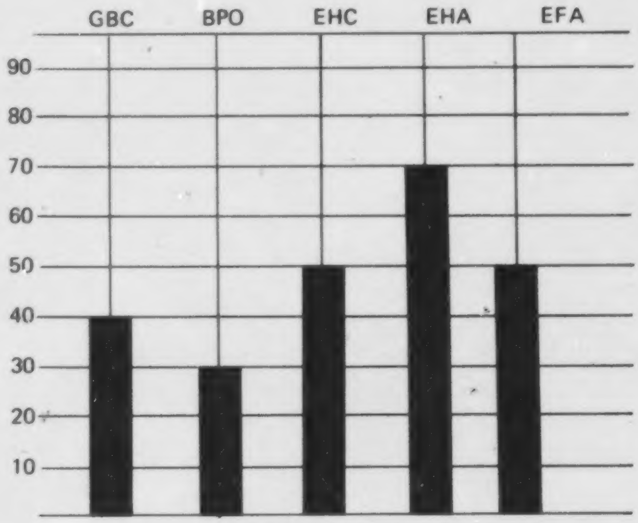
MOTOR ABILITY TIME PRESCRIPTION CHART

Total Deviation Points Below 90 ____

Total Exercising Time 900

Prescription Time Multiplier ____

Adjustment Time ____



	Gross Body Coordination	Balance and Postural Orientation	Eye and Hand Coordination	Eye and Hand Accuracy	Eye and Foot Accuracy	Total
Deviation Points Below 90	50	60	40	20	40	210
Prescription Time Multiplier	4	4	4	4	4	
Sub Total	200	240	160	80	160	840
Adjustment Time						60
Total Prescription Time Per Exercise (In Seconds)*	200	300	160	80	160	900
In Minutes and Seconds	3:20	5:00	2:40	1:20	2:40	15:00

---

*To determine prescription time for each factor: (1) find prescription time multiplier by dividing total exercising time (900 seconds) by total stanine points below 90 (drop all decimals in the multiplier) (2) multiply deviation stanine points for each factor by the prescription time multiplier; (3) add adjustment time to the lowest factor; (4) total prescription time in seconds; and, (5) convert times to minutes and seconds.

(Source: Thomas M. Vodola, "The Effects of Participation Time Variations on the Development of Physical Fitness, Motor Skills and Attitudes," unpublished doctoral dissertation, Temple University, 1970, p. 150.)

Step No. 2:
To determine deviation points subtract each stanine score from 90 (Gross Body Coordination: 90-40 = 50).

Step No. 3:
Total deviation points are obtained by adding all deviation points below 90 (Gross Body Coordination *50*, Balance-Postural Orientation *60*, Eye-Hand Coordination *40*, Eye-Hand Accuracy *20*, Eye-Foot Accuracy *40)*, Total = 210.

Step No. 4:
To obtain the prescription time multiplier, divide the total exercise time in seconds by the total deviation points (900 seconds ÷ 210 = 4.2). Drop all decimals in the multiplier. The remainder of 60 will be utilized later as the adjustment time.

Step No. 5:
To obtain total prescription time per exercise in seconds, multiply the deviation stanine points for each factor by the prescription time multiplier (e.g., Gross Body Coordination, 50 x 4 = 200).

Step No. 6:
To obtain exercise time in minutes and seconds, divide total prescription time in seconds by 60 (e.g., Gross Body Coordination, 200 ÷ 60 = 3:20).

Step No. 7:
To obtain adjustment time, divide total exercising time in seconds by total deviation points below 90 (900 ÷ 210 = 4, plus a remainder of 60). The whole number (4) becomes the multiplier and remainder (60) becomes the time adjustment factor which is added to the lowest score.

Select motor ability tasks and activities. Based on John's objective and subjective assessment, the following time prescriptions and activities are recommended:[1]

Factor	Tasks and Activities	Time
Gross Body Coordination (3 minutes, 20 seconds)	1. Crawling	1:00
	2. Skipping	1:00
	3. Hopping	1:00
	4. Jumping	:20
Balance-Postural Orientation (5 minutes)	1. Heel-toe balance	1:00
	2. Hands-knees-toes balance	1:00
	3. Push balance	1:00
	4. Tip toe balance1	1:00
	5. Step through balance	1:00
Eye-Hand Coordination (2 minutes, 40 seconds)	1. Bat stationary ball with hand	1:00
	2. Bat moving ball with hand	1:00
	3. Catch bounced ball	:40
Eye-Hand Accuracy (1 minute, 20 seconds)	1. Bat ball off "tee" into net	1:00
	2. Shuffleboard	:20
Eye-Foot Accuracy (2 minutes, 40 seconds)	1. Kick stationary ball into net	1:00
	2. Kick rolling ball into net	1:00
	3. Drop-kick ball over target	:40

When writing individual prescriptions, consideration should also be given to the following sound teaching strategies:

1. Vary the student learning experiences for each factor so that the child develops a broad-based competency rather than competency in a few discrete skills
2. Include tasks that are designed to remedy problems revealed by the subjective assessment
3. Structure each task to insure success
4. Include tasks that will reinforce pupil strengths

Teacher learning experience. Up to this point, step-by-step procedures have been described for administering the Motor Ability Test, assessing the results objectively and subjectively, and planning an individualized motor activity program (time basis) to remedy deficiencies and reinforce strengths. (The prekindergarten and perceptual-motor phases of the motor program have not been included in most parts of the individualized process because the instruments used to gather baseline data are screening devices rather than tests, and therefore are not appropriate for the gathering of finite, objective information.) This section provides the teacher with a viable prescriptive learning experience which, stated behaviorally, is as follows:

Given an individual's raw scores on the Township of Ocean Motor Ability Test (and all pertinent forms), the teacher will:

1. Compile raw scores based on the Motor Ability Test
2. Determine percentile and stanine scores
3. Determine Motor Ability Index (MAI)
4. Construct an Individual Profile Chart
5. Convert stanine scores to time prescriptions
6. Select tasks and activities based on time prescriptions. Each problem will include a behavioral statement of all information that is needed to solve the particular problem. Answers to the problems are located in Appendix L.

---

[1] The activities recommended are explained in detail in Chapter Six which provides a sequential list of tasks and activities for each motor ability factor.

Problem No. 1: Compile Raw Scores
Given the data, the student will tabulate the raw scores for each factor.

Gross Body Coordination	**Attempts**	**Raw Score**
Walk	++	
Creep	++	
Climb	++	
Skip	00	
March-in-place	00	
	Total	

Balance and Postural Orientation	**Attempts**	**Score**
Stand both feet	+00	
Stand right foot	000	
Stand left foot	++0	
Jump one foot	+0+	
Jump both feet	++0	
Jump both feet	0++	
Hop right foot	0++	
Hop left foot	+++	
	Total	

Eye and Hand Coordination	**Attempts**	**Raw Score**
Catch	+++	
Ball bounce and catch	+0+	
Touch ball (lateral)	+00	
Touch ball (fore and aft)	00+	
Bat ball (one hand)	0+0	
Bat ball (bat)	+++	
	Total	

Eye and Hand Accuracy	**Attempts**	**Raw Score**
Throw right hand	3,2,2	
Throw left hand	1,2,2	
	Total	

Total Raw Score

Gross Body Coordination Balance	
Eye-Hand Coordination	
Eye-Foot Accuracy	
Eye-Hand Accuracy	
Total	

Anecdotal Remarks: *Performs hopping tasks satisfactorily, but has extreme difficulty shifting body weight from one foot to the other. Evidences difficulty integrating visuo-motor tasks.*

Problem No. 2: Determine Percentile and Stanine Scores
Given the raw scores from Problem No. 1 and the format provided below, the student will: 1) convert raw scores to percentiles; 2) convert percentiles to stanines; and 3) determine the composite stanine score. (Use the Motor Ability Test norms, Table 3-1, on page 46 to convert raw scores to percentiles and percentiles to stanines.)

Test Factors	**Raw Score**	**Percentile**	**Stanine**
Gross Body Coordination			
Balance-Postural Orientation			
Eye-Hand Coordination			
Eye-Hand Accuracy			
Eye-Foot Accuracy			

Ekblom has designed a composite form for recording the scores for an entire class.[1] (Refer to Appendix M for the format, plus an explanation.)

Problem No. 3: Determine the Motor Ability Index (MAI)
Given the composite stanine score from Problem No. 2 and the information provided below, the student will compute the MAI.

Formula for computing the MAI

$$\text{MAI} = \frac{\text{Composite Stanine Score} \times 10}{\text{Number of test factors}}$$

$$\text{MAI} = \frac{(\qquad) \times 10}{5}$$

MAI =

Problem No. 4: Construct an Individual Profile Chart
Given the individual stanine scores from Problem No. 2, the student will plot the information on Table 4-2 on page 56.

Problem No. 5: Convert Stanine Scores to a Time Prescription
Given the individual stanine scores from Problem No. 2, the student will compute individual time prescriptions for a 15-minute period. (Compute time prescriptions on Table 4-3, page 57.)

Problem No. 6: Select Tasks and Activities
Given the information provided in Problems No. 1 through No. 5, the student will prescribe appropriate tasks and activities. Please refer to Chapter Six Tasks and Activities. (Place an asterisk (*) adjacent to those tasks that have been prescribed in accordance with the "Anecdotal Remarks" above.)

---

[1] Robert Ekblom, "Motor Ability Test: Class Record Sheet."

TABLE 4-2
MOTOR ABILITY PROFILE CHART

	GBC	BPO	EHC	EHA	EFA	
90						90
80						80
70						70
60						60
50						50
40						40
30						30
20						20
10						10

Factor	Tasks and Activities	Time
Gross Body Coordination		

Factor	Tasks and Activities	Time
Balance – Postural Orientation		
Eye – Hand Coordination		
Eye – Hand Accuracy		
Eye – Foot Accuracy		

TABLE 4-3
MOTOR ABILITY TIME PRESCRIPTION CHART

Total Deviation Points Below 90 ______
Total Exercising Time 900
Prescription Time Multiplier ___
Adjustment Time ___

STANINE SCORES

	GBC	BPO	EHC	EHA	EFA
90					
80					
70					
60					
50					
40					
30					
20					
10					

	Gross Body Coordination	Balance and Postural Orientation	Eye and Hand Coordination	Eye and Hand Accuracy	Eye and Foot Accuracy	Total
Deviation Points Below 90						
Prescription Time Multiplier						
Sub Total						
Adjustment Time						
Total Prescription Time Per Exercise (In Seconds)*						
In Minutes and Seconds						

---

*To determine prescription time for each factor: (1) find prescription time multiplier by dividing total exercising time (900 seconds) by total stanine points below 90 (drop all decimals in the multiplier) (2) multiply deviation stanine points for each factor by the prescription time multiplier; (3) add adjustment time to the lowest factor; (4) total prescription time in seconds; and, (5) convert times to minutes and seconds.

(Source: Thomas M. Vodola, "The Effects of Participation Time Variations on the Development of Physical Fitness, Motor Skills and Attitudes," unpublished doctoral dissertation, Temple University, 1970, p. 150.)

TASK ANALYSIS

Current literature abounds with diagnostic-prescriptive (DP) teacher training models and strategies. However, it is difficult to locate materials related to *task analysis*, i.e., the ability to "break down" a complex task into its component parts.

One theory regarding the lack of emphasis related to task analysis and its concomitant strategies is that teachers tend to "teach content" rather than "teach children," a trite but true statement. Content-oriented instructions tend to view activities as "ends in themselves;" task analysis-oriented individuals view the child as the center of the learning process, and content as a "means to an end."

This section provides the teacher with a learning experience which will serve as a viable means of bridging the gap between *diagnosis* and *prescription.*

Diagnostic-Prescriptive Learning Experience

The establishment of an individualized physical activity assumes that the teacher can analyze tasks and activities. Further, once the prescriptive tasks have been selected, the teacher be able to sequence tasks from the simple to the complex.

On the following pages a classification index has been provided to assist you in understanding the concept of *TASK ANALYSIS.*[1] The charts reflect the potential motor and physical fitness values derived through involvement with various devices and equipment.

The Assignment:

1. Using the existing motor and physical fitness factors, or some modification thereof, design a *Task Analysis Classification Index.* Replace the existing equipment items with the movement activities and games you currently use in your school situation. Analyze each activity and determine the two major values derived from the activity. Record the number "1" and "2" in the appropriate boxes – that is number "1" reflects the most important value and number "2" reflects the secondary value. Be prepared to justify the values identified. Fleishman[2] provides some guidelines for analyzing physical fitness activities which may assist in your assignment.

TABLE 4-4
EQUIPMENT CLASSIFICATION INDEX

Directions:
This table lists devices and equipment described in this publication, according to their possible purposes and potential uses. In every instance additional skills and concepts can be developed through different uses and varied approaches for each device or piece of equipment. With additional modifications, the same apparatus can become effective in attacking other problems and in placing emphasis upon other skills and concepts. Regardless of the activity, the instructor or leader must know the reasons he is using an activity and must communicate this to the individual participant or group in terms they understand.

	Static Balance	Dynamic Balance	Eye-Hand Coordination	Eye-Foot Coordination	General Coordination	Power/Speed	Muscular Endurance	Cardiorespiratory Endurance	Flexibility	Agility	Rhythm	Games
Balance Boards	X	X	X	X	X				X			X
Teeter Boards	X	X	X	X	X				X			X
Balance Beam	X	X	X	X	X				X	X		X
Slanted Balance Beam	X	X	X	X	X				X	X		X
Slant Ramp	X	X	X	X	X				X	X		X
Sinking Tires	X	X	X	X	X				X	X		X
Stilts	X	X	X	X	X				X	X		X
Swinging Bridge	X	X	X	X	X				X	X		X
Logs	X	X	X	X	X				X	X		X
Walking/Climbing Board	X	X	X	X	X				X	X		X
Stairs	X	X	X	X	X	X	X	X	X	X		X
Buckin Broncho	X	X	X	X	X				X	X	X	X

---

[1] "Classification Index." Distributed by the Information and Research Utilization Center in Physical Education and Recreation for the Handicapped.

[2] Edwin A. Fleishman, *The Structure and Measurement of Physical Fitness,* 1964).

TABLE 4-4

EQUIPMENT CLASSIFICATION INDEX (Continued)

	Static Balance	Dynamic Balance	Eye-Hand Coordination	Eye-Foot Coordination	General Coordination	Power/Speed	Muscular Endurance	Cardiorespiratory Endurance	Flexibility	Agility	Rhythm	Games
Climbing Frame	X	X	X	X	X				X	X		X
Overhead Ladder	X	X	X	X	X		X		X			X
Swinging O-H Ladder		X	X	X	X		X		X	X		X
Peg O-H Ladder	X	X	X	X	X		X		X	X		X
Climb-Jump Board			X		X	X	X		X	X		X
Barbell, Dumbbell					X	X	X					
Stretcherciser					X	X	X					
Wrist Roller					X	X	X					
Team Exercise					X	X	X					
Isometric Exercise						X	X					
Paddle Rattle			X								X	X
Tinikling Set			X	X	X					X	X	X

TABLE 4-4

EQUIPMENT CLASSIFICATION INDEX (Continued)

	Static Balance	Dynamic Balance	Eye-Hand Coordination	Eye-Foot Coordination	General Coordination	Power/Speed	Muscular Endurance	Cardiorespiratory Endurance	Flexibility	Agility	Rhythm	Games
Wiggley Wobbley	X	X	X	X	X	X	X	X	X	X	X	X
Jump Drum	X			X	X	X	X	X		X	X	X
Spring Bed	X	X		X	X	X	X	X		X	X	X
Vaulting Horse and Box			X	X	X	X	X		X	X		X
Hurdles			X	X	X	X		X	X	X		X
Jumping Standards			X	X	X	X				X		X
Climber	X	X	X	X	X				X			X
Climbing Tower	X	X	X	X	X				X	X		X
Climbing Wall			X	X	X				X	X		X
Adjustable Monkey Bars	X	X	X	X	X	X	X	X	X	X		X
Rope Climber			X		X		X					X
Rope Disc												X

TABLE 4-4

EQUIPMENT CLASSIFICATION INDEX

	Static Balance	Dynamic Balance	Eye-Hand Coordination	Eye-Foot Coordination	General Coordination	Power/Speed	Muscular Endurance	Cardiorespiratory Endurance	Flexibility	Agility	Rhythm	Games
Drum			X								X	X
Sand Paper Blocks			X								X	X
Hoops	X	X	X	X	X				X	X	X	X
Shuffle Board			X									X
Target Toss			X									X
Mini Tetherball			X									X
Batting Tee			X									X
Scooter Boards					X				X	X		X

PERCEPTUAL-MOTOR (PM) PRESCRIPTION CONSIDERATIONS

Throughout the manual, emphasis has been placed on the development of the teacher's observational powers so that she can effectively assess performance and prescribe activities to remediate the underlying problem(s). The Perceptual-Motor Screening Instrument (page 38) was designed to provide the teacher with a prototype for identifying specific deficiencies. This section stresses PM problems which are prevalent among mentally retarded and learning disabled children and suggests activities for their resolution. In addition, it provides a variety of perceptual-motor activities that can be incorporated in a classroom setting, or be used as an adjunct to the academic program.

Prescriptions Based on PM Screening Instrument Problem

Problem Indicators	**Prescriptive Activities**
• Cannot hop	• Balance on both feet, left and right foot; jump in place and off a bench; jump off a bench and land on one foot; hip in place.
• Hops on one foot only	• Identification of body parts, stressing right and left differentiation; crawling on mat, stressing oppositional movements; hopping on left and right foot and verbalizing left and right
• Difficulty balancing	• Same activities as "cannot hop."
• Difficulty shifting weight	• Same activities as "cannot hop."
• Cannot verbally discriminate between loud and soft sounds	• Repetitively reproduce a loud sound and have the child repetitively verbalize; ditto the soft sound; sequence of loud sounds plus one soft sound and have the child discriminate and vice versa
• Difficulty with auditory memory	• Review same activities for "cannot verbally discriminate," followed by tasks in which the child must verbalize increasingly longer sequences of loud and soft sounds

Perceptual-Motor Matching

Item: *Matching audio and motor tasks*
Factor: Integrating Audio and Motor Tasks
Prescriptive Activities

1. Have child hop repetitively on right foot while verbalizing "right."
2. Add "soft" sound as child performs No. 1 above. (Teacher reinforces by stating "You hop on your right foot when you hear the soft sound.")
3. Have child hop repetitively on left foot while verbalizing "left."
4. Add loud sound as the child performs No. 3 above. (Teacher reinforces by stating "You hop on your left foot when you hear the loud sound.")
5. Single task: Have the child match soft sound by hopping on right foot; loud sound by hopping on left foot.
6. Sequentially increase difficulty of "matching" until the child can satisfactorily perform the task required at Station No. 1, then proceed to Station No. 2.

(Awareness Workshop, Montpelier, Vermont)

Prescriptions For Psychological Aberrations[1]

Problem Indicators	Prescriptive Activities
• Hyperactivity	• Perform relaxation exercises daily. Exercises should include tensing and then gradually relaxing the major muscle groups of the body • Perform regular motor activities with a focus on decelerating neural impulses. For example, have students run as fast as they can, 3/4 speed, 1/2 speed, and as slowly as they can • Varying tasks and activities are essential when working with children who manifest a tendency to perseverate. In order to overcome student reticence to perform, the parent and teacher must be gentle, patient, and yet forceful. Once the child has been assisted through the movement, he will develop confidence and start to repeat the same task again, thus the need for constant variation
• Distractibility	• Structure the teaching environment so that distracting stimuli are minimized • Have the group concentrate and work on one task until success is achieved before moving on to the next task • Increase the difficulty of a task as soon as success is achieved before moving on to the next task • Perform relaxation exercises
• Dissociation	• Stress the "whole," "part," "whole" method of teaching. Start by having the child see the total pattern of performance desired, then break the task down into its component parts, and finally, constantly demonstrate the "whole." • Use pegboards to develop "closure" perceptual-motor skills. Have the child view an incomplete pegboard pattern and attempt to reproduce the completed pattern on a second board. (See Figure 4-2.)

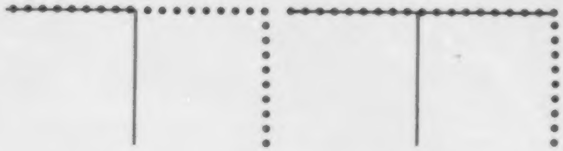


Fig. 4-2 Pegboard Closure Activity
(Courtesy of the New Jersey Association for Children with Learning Disabilities.)

Serial ordering. Prescribe a variety of tasks, activities, or games that require the child to demonstrate a specific sequence. As specific goals are attained, increase the complexity of the directions. Prescribe some tasks that indicate transferability to daily living. For example, you might request that a student pick up a piece of paper, throw it in the wastebasket, close the door, and sit down (in that order). The ability to order tasks serially as requested can enhance a child's auditory perception, attention span, ability to follow directions, and therein assist in the development of spelling and reading skills.

Student learning experience: have the children devise sequences for their partners, monitor and give feedback regarding responses.

Motor-cognitive-academic achievement (MCAA). Recent research efforts seem to indicate that the proper structuring of physical education activities can enhance a child's cognitive abilities and academic achievement. If tasks, activities, and games are designed to include the following features, total learning will be enhanced:[2]

(1) Two or more "information systems" (auditory, visual, etc.) impinging upon the learner, one of which is motor (perceptual-motor).
(2) Involve the learner in the decision-making process (cognition).
(3) Require the learner to make a decision that is *directly related* to academic achievement (transfer of learning).

An illustrative example will help to clarify the MCAA approach:

(1) The child is prescribed beanbag tossing through an opening in a target to enhance his eye and hand accuracy. The task involves a visuo and motor response.
(2) The child is prescribed beanbag tossing at a target that has several openings, with letters recorded above each aperture. (See Figure 4-3.) The task requires the child make a decision.

---

[1] Thomas M. Vodola, Chapter 7, "Physical Education for the Handicapped: A Neglected Approach" in *Handbook on Learning Disabilities*, ed., Robert E. Weber, pp. 148-50.

[2] G.N. Getman, "Lecture: Perceptual-Movement Programming."

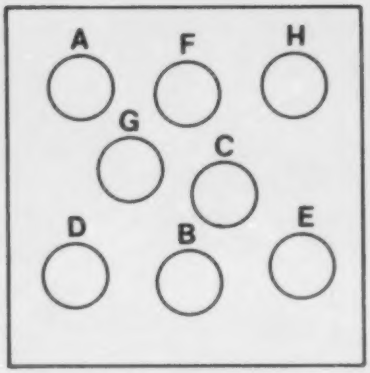


Fig. 4-3 Target-Tossing Task

(3) The child is directed to attempt to identify letters, or spell words by throwing beanbags through the appropriate openings. The task involves: a visuo and motor response; cognition (knowledge level); and academic achievement (learning letters of the alphabet and spelling words).

The MCAA approach has important implications for teaching children with learning disabilities. Research reveals that through this approach the MR/LD population has made the greatest academic gain. The teacher should devise and prescribe MCAA tasks, where possible. (Use of MCAA method presupposes the child has developed competency in the motor task.)

Student learning experience: have one student verbalize a word and the partner attempt to spell the word by tossing beanbags through the correct openings; the verbalizer to provide appropriate feedback regarding the performer's response.

Perceptual-Motor Prescriptive Summary

The selection of appropriate tasks for children with PM problems is contingent upon the skillful observation of pupil performance by the teacher and a systematic procedure for pinpointing the deficiencies. Skillful observation means that the teacher notes: "how" the child performs each task; and "how" the child performs on the total test battery.

Pinpointing the deficit requires the teacher to utilize the whole-part-whole method. The sequential steps are as follows:

1. Have the child perform the task in its entirety (whole method). For example the child is requested to hop a pattern in which he must place his left foot in the circles and his right foot in the squares.
2. If the child fails, break the task down to its component parts (part method) and have the child perform each task separately. The component parts are:
   - – visual discrimination between circles and squares
   - – the ability to differentiate left from right
   - – the ability to hop on either foot and to transfer weight from one foot to the other.

   If the child fails any one of the discrete tasks, he should be provided a variety of activities to remediate the problem.
3. Upon successful completion of all discrete tasks, the teacher should have the child perform the task in its entirety again (whole method). If the child again fails to integrate all responses, the teacher must devise a variety of tasks that require the child to integrate similar component parts until he is successful. However, the integrations must be structured from the simple to the complex. In the example cited, a simpler task would be to have the child hop alternately on left and right foot before introducing the circles and squares. Possibly another example would help to clarify the resolution of a perceptual-motor integration problem.

If a child cannot perform the task of hitting a moving whiffleball, he should not be required to continue at that task. His problem may be due to integrating all perceptual experiences to develop the proper outgoing neural responses. The prescriptive recommendation would be to provide a variety of visuo-motor responses such as:

- striking a stationary ball with the hand
- catching the ball as it moves through a variety of planes
- striking a stationary ball with a bat (or extension of the hand)
- striking a ball as it moves through a variety of planes

Many times the integration of PM tasks is stymied because of the learner's distorted "picture" of the perceptual and motor cues. In such situations, the teacher must analyze the task and provide a variety of similar experiences for the learner so that he can continually modify his responses until he compensates for the existing problem(s). Thus, the general rule to remember when prescribing for integrative response problems is to *provide the child with a variety of sequentially structured, concrete PM experiences that are discrete parts of the total task required.*

PROGRAM IMPLEMENTATION[1]

Thus far, the manual has dealt with the TAPE procedure. Many other factors must also be considered in initiating a successful individualized program. For example, "What is the role of the teacher in this highly structured environment?" "How can one motivate a student frustrated by a failure to accomplish his tasks?" "What other factors must be considered to enhance program success?" Such questions are considered in the remaining pages of this chapter.

---

[1] Refer to Appendix N for guidelines for initiating a summer D&A Program.

The Role of the Teacher

To individualize instruction, the teacher must modify his teaching style so that he becomes a "partner" in the educational process. Instead of devoting most of the instructional time to lecturing and "telling" the students what to do, he must guide, assist, stimulate, motivate, and act as a resource person constantly. He must, in fact, make the student the "center" of the learning process. The teacher seldom answers questions; but, he skillfully guides the student through a series of questions until the individual inductively arrives at the solution to the problem. Further, the teacher does not provide experiences which result in rote learning. All tasks and activities are designed to develop the child's ability to comprehend, apply knowledge previously learned, analyze problems, synthesize information, and intelligently arrive at solutions.

Strategies to Motivate Students

Assuming one has incorporated all of the strategies listed above, will the students be motivated? Not necessarily. Consideration must also be given to "personalizing" instruction and providing "student learning experiences."

Many educators view the terms "individualized instruction" and "personalized instruction" synonomously. The Project ACTIVE Training Program defines "individualized" in terms of the TAPE process – the focus is on instruction. "Personalized," on the other hand, relates to teacher-pupil rapport – the focus is on the human element. It is believed that many highly innovative, individualized programs have not been successful because they have lacked the personalization factor. Thus, it is recommended that throughout the motor performance unit, the teacher be continually aware of each child as a human being with whom he must constantly strive to enhance his relations. Some techniques recommended to enhance personalization of instruction would be:

1. to refer to each pupil by his or her first name
2. to look for opportunities to reinforce tasks performed reasonably well
3. to structure all tasks so that every child can achieve a degree of success
4. to empathize with each child in his performance and behavior
5. to provide opportunities for each child to perform tasks he or she enjoys
6. to structure all experiences so as to ensure maximum involvement for each child.

Repeated learning experiences are necessary for the child to "internalize" the concept by creating an environment conducive to a high level of cognition.

The twelve tasks presented below serve a dual purpose: helping the child internalize facets of the motor program; and providing parameters for teacher and pupil roles.

Task No. 1:

Perform the Township of Ocean School District Motor Ability Test, Grades K-2.

Teacher's Role

Fig. 4-4 Personalizing Instruction: Teacher-Pupil Interaction
(Mini-Training Program, Jersey City State College, Jersey City, N.J.)

a. Explain and demonstrate the correct technique for performing each test item.

b. Record raw scores.

Student's Role

a. Perform test items as directed.

Task No. 2:

Determine Percentile, Achievement and MAI Scores: Plot Scores on Profile Sheets: Plan Prescriptive Program, K-2.

Teacher's Role

a. Determine all scores.

b. Plot scores on profile sheets.

c. Plan prescription programs.

Task No. 3:

Design Tasks to Improve Gross Body Balance, Gross Body Coordination, Eye and Hand Coordination, Eye and Hand Accuracy, and Eye and Foot Accuracy, Grades 3-12.

Teacher's Role

a. Explain and demonstrate tasks and activities designed to improve motor performance.

b. Assist students in their choice.

Student's Role

a. Devise an original task to improve each motor ability factor.

b. Devise an original task to improve a motor ability factor that is appropriate for his grade level.

Task No. 4:

Demonstrate a Motor Ability Skill, Grades K-4.

Teacher's Role

a. Structure the situation so that each student is a "leader."

b. Assist "followers" who have difficulty performing skills.

Student's Role

a. Serve as a "leader" in the game "Follow the Leader."

b. Participate as a "follower."

Games of this type reinforce the competencies of the "leaders" and provide practice in weak areas for "followers."

Fig. 4-5 Prescriptive Activity: Line Walking
Factor: Gross Body Balance

Task No. 5:
Participate in Movement Education, Exploration, and Activities and Games, K-6.
Teacher's Role
a. Structure a task and then encourage students to implement creatively.
b. Permit students to structure subsequent tasks and activities.
c. Assist students who have difficulties with certain movement patterns.

Student's Role
a. Implement tasks as structured.
b. Serve as a "leader" in structuring new tasks.

Fig. 4-6 Prescriptive Activity: Follow the Leader
Factor: Visuo-Motor Integration
(Township of Ocean Summer D&A Program, Oakhurst, N.J.)

Fig. 4-7 Prescriptive Activity: Bear Climb
Factor: Eye-Hand Coordination
(Teacher Training Program, West Elementary School, Slayton, Minnesota)

Task No. 6:
Assess Your Motor Performance in Game Situations, Grades 9-12.
Teacher's Role
a. Provide a variety of individual and group activity games.
b. Note student deficiencies and assist on an individual basis.
c. Assist students with their personal analysis.

Student's Role
a. Keep a record of game infractions and violations (such as "traveling" and repeated fouling in basketball.)
b. Analyze possible cause(s) of infractions or violations; for example, repeated "traveling" and fouling may be attributable to poor body balance.
c. Make a list of his areas of weakness (based on analysis).

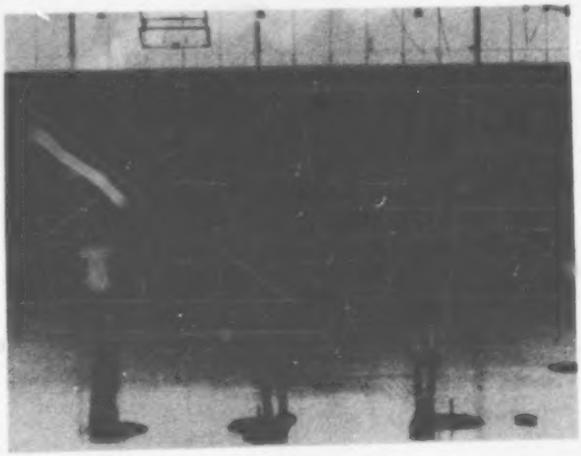


Fig. 4-8 Prescriptive Activity: Quoits
Factor: Eye-Hand Accuracy
(Township of Ocean Summer D&A Program, Oakhurst, N.J.)

Task No. 7:

Participate in Tasks, Activities Designed to Improve Specific Deficiencies, Grades 9-12.

Teacher's Role

a. Provide a variety of tasks and activities designed to improve specific motor deficiencies.

b. Guide and assist the student in his selection.

Student's Role

a. Select tasks and activities to improve his areas of weakness.

b. Participate in the tasks and activities. Keep a record of progress.

Task No. 8:

Verbalize a Series of Tasks for a Partner to Replicate, Grades 1-6.

Teacher's Role

a. Set up activities and games based on serial ordering (i.e., students must perform a series of of tasks in sequential order).

b. Explain and demonstrate the game; pair students; and have one student call out the sequence, followed by the other student performing the tasks in sequence.

c. Stimulate other types of similar games.

Student's Role

a. Participate as verbalizer and performer. When serving as the verbalizer, he is to note the sequence of performance and provide the proper feedback.

b. Devise and implement similar games that incorporate the identification and spelling concept. Values: Math, spelling and reading readiness skills, increased attention-span.

Task No. 9:

Participate in Tasks Designed to Enhance Perceptual-Motor Responses, Grades K-6.

Teacher's Role

a. Design and implement tasks that focus on perceptual abilites.

b. Design and implement tasks that focus on motor abilities.

c. Design and implement tasks that focus on the integration of perceptual-motor responses.

d. Individualize student prescriptions based on the results of "a" and "b" above.

Student's Role

a. Perform "perceptual," "motor," and "perceptual-motor" tasks. Values: perceptualization, motor performance, integration of perceptual and motor responses.

Task No. 10:

Participate in Relaxation Type Activities, Grades K-12, (The Hyperactive Student).

Teacher's Role

a. Explain and demonstrate relaxation exercises.

b. Devise and implement games that decrease neural impulses that impinge on the individual.

c. Explain the concept and tasks to parents so that they can implement at home.

Student's Role

a. Perform the relaxation exercises for ten minutes each day.

b. Concentrate on noting the different degrees of tension involved in deceleration games so that he can acquire the ability to relax. Values: Ability to relax various muscle groups, concentrate on the task at hand, and perform tasks more efficiently.

Fig. 4-9 Prescriptive Activity: Tetherball
Factor: Visuo-Motor Integration
(Township of Ocean Summer D&A Program, Oakhurst, N.J.)

Task No. 11:

Participate in Tasks Designed to Increase Attention-Span, Grades K-12. (The Distractible Student).

Teacher's Role

a. Explain and demonstrate tasks to increase attention-span (i.e., tasks designed to maintain student concentration for increasing periods of time).

b. Devise and implement games that increase student concentration (e.g., Task No. 8).

c. Provide positive feedback to enhance increased attention-span.

Student's Role

a. Perform the tasks and games as directed.

b. Strive to increase his time duration in performing a specific task or game. Values: Ability to concentrate for increasing periods of time, and perform tasks more efficiently and effectively.

Fig. 4-10 Prescriptive Activity: Balloon Keep-Up
Factor: Visuo-Motor Integration
(Township of Ocean Summer D&A Program, Oakhurst, N.J.)

Task No. 12:
Participate in Motor, Cognitive and Academic Achievement (MCAA). Tasks, Grades K-6.
Teacher's Role

a. Design and implement MCAA tasks and games; tasks and games that meet the following criteria:
   (1) involve two or more sensory inputs
   (2) involve a motor response
   (3) involve a decision by the student
   (4) involve transfer of learning to a specific academic skill

Student's Role

a. Participate in the tasks and games.
b. Observe partner and classmate performance and assist when help is needed.
c. Attempt to devise and implement new MCAA experiences. Values: Enhancing decision-making and academic achievement.

All of the above experiences will enhance the child's self-concept if tasks and activities are structured to insure success and are supported by immediate, positive reinforcement.

Structuring the learning environment. Establishing a program to meet the varied needs of any group of students requires the restructuring of the traditional gymnasium or classroom setting. The technique recommended is to create several mini-instructional centers within the gymnasium or classroom as seen in Figure 4-12. This affords the teacher flexibility in programming whereby he can prescribe individualized and/or group activities within the same environment.

Fig. 4-11 Prescriptive Activity: Grid Game
Factor: Motor-Academic

Other Factors to be Considered

Record keeping poses a problem for the teacher. It is recommended that the teacher prepare an individual folder for each child to file all test forms. Further, to minimize prescriptive error, some form should be devised so that tasks, time duration, attendance, and anecdotal remarks can be recorded on a daily basis. The Individual Participation Card (see Table 4-5) provides one form that can be used for record keeping. The reverse side of the 5 x 8 card can be kept blank for entering anecdotal remarks. Other considerations would include teacher-pupil ratio (1-10), size of the teaching station (30' x 60'), supply and equipment needs (refer to Appendix D), and time allotment for the program (a minimum of two thirty-minute periods per week).

The reverse side of the 5 x 8 card can be kept blank for entering anecdotal remarks. Other considerations would include teacher-pupil ratio (1-10), size of the teaching station (30' x 60'), supply and equipment needs, and time allotment for the program (a minimum of two thirty-minute periods per week.)

Sample lesson plan. John Doe is enrolled in a developmental physical education class. He is sheduled for a thirty-minute class period on Tuesdays and Thursdays in addition to his regular physical education program. The period is structured so that John receives fifteen minutes of individualized instruction based on his time prescription and fifteen minutes of group activity designed to reinforce his strengths and to develop social interaction and emotional growth. A copy of John's program is presented below:

Period 1	**30 Min.**	**Tuesday and Thursday**
Individual Activity		**Time Prescription**
Gross Body Coordination		3 min. 20 sec.
Balance-Postural Coordination		4 min. 20 sec.
Eye-Hand Coordination		2 min. 40 sec.
Eye-Hand Accuracy		2 min.
Eye-Foot Accuracy		2 min. 40 sec.
		15 min. **Total**

Group Activity: 15 minutes
Game: "Follow the Leader"
Equipment: Varies according to leader's directions
Formation: Varies according to leader's directions

Description: The teacher selects a "leader." The leader performs a motor task of his or her choice which is replicated by the other class members. After every one has performed the task, the teacher selects another student as the new leader. Continue the game until all students have served as "leaders" and "followers."
Teaching Hints:

- Be sure to provide all students with the opportunities of acting as leaders and followers. Rationale: When serving as leaders, students select those motor tasks they can perform very well – thus, reinforcing their strengths. When serving as followers, students will be required to perform some tasks in which they are deficient, thus requiring them to practice their deficiencies.

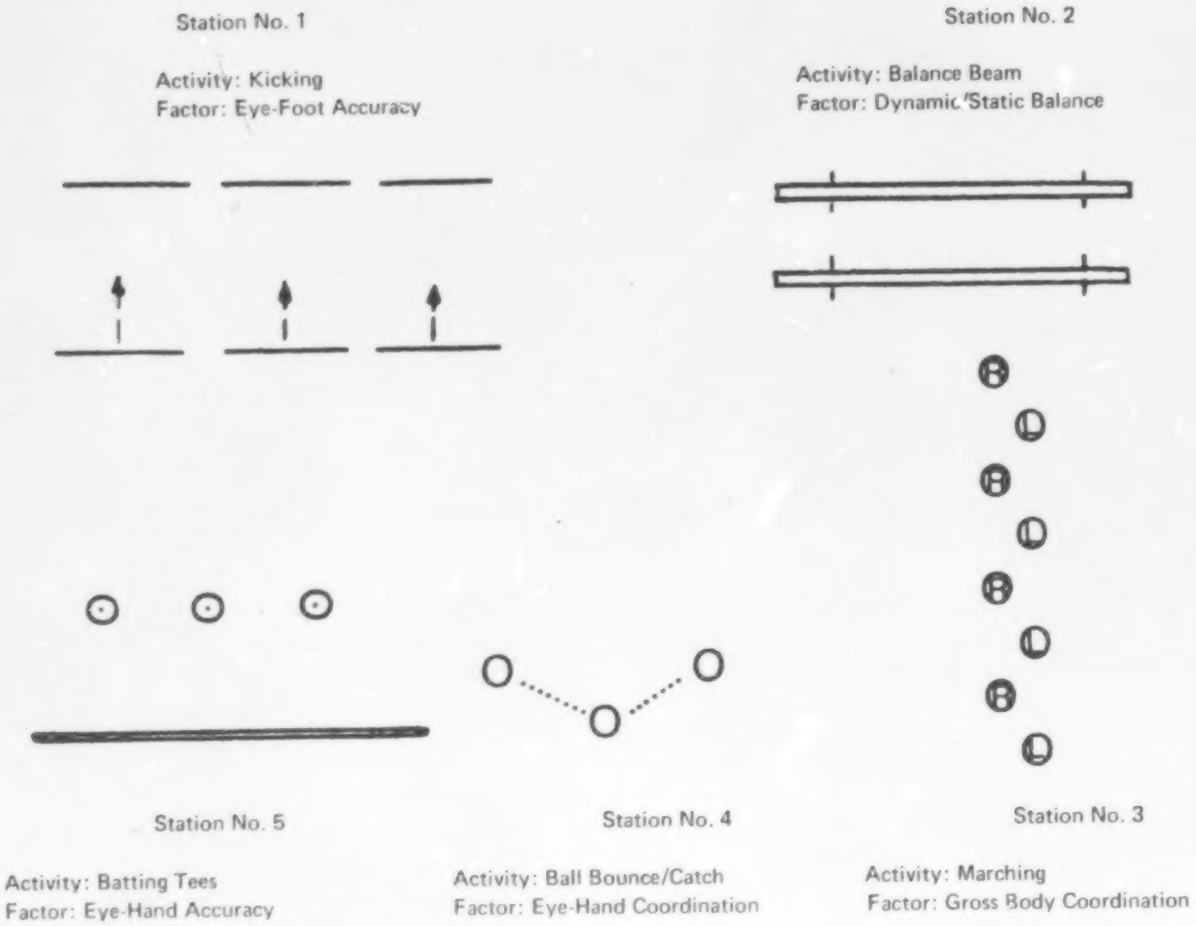

Station No. 1
Activity: Kicking
Factor: Eye-Foot Accuracy
Station No. 2
Activity: Balance Beam
Factor: Dynamic/Static Balance
Station No. 5
Activity: Batting Tees
Factor: Eye-Hand Accuracy
Station No. 4
Activity: Ball Bounce/Catch
Factor: Eye-Hand Coordination
Station No. 3
Activity: Marching
Factor: Gross Body Coordination

Fig. 4-12 Mini-Teaching Stations

TABLE 4-5

INDIVIDUAL PARTICIPATION CARD[1]

Name ______________ Day ______ Period ______ Instructor ______________ School ______________

Classification ______________

Motor Skills	Participation Time (Minutes)											
Bilaterality	3											
Balance and Postural Orientation	4											
Eye and Hand Coordination	2											
Eye and Hand Accuracy	2											
Ocular Pursuit												
Eye and Foot Accuracy	2											
Perceptual-Motor Skills												
Auditory Response Skills												
Auditory and Motor Skills												
Visual Response Skills												
Visual Motor Response Skills												
Audio, Visuo, and Motor Response Skills												
Orthopedic Program												
Range of Motion Exercises												
Strength Exercises												
Dates	9/30											

Handeness R L Footedness R L

---

[1] Courtesy of the Township of Ocean School District.

TAPE EVALUATION PROCEDURES

CHAPTER FIVE

T
A
P
EVALUATION PROCEDURES

Previous chapters have focused on gathering baseline information, assessing performance and prescribing activities. This chapter evaluates student progress at the end of a specific block of time so that a decision can be made regarding subsequent programming. Evaluation differs from assessment in that "assessment" implies the constant gathering of "process" information so that the prescription can be modified as needed; whereas "evaluation" is viewed as the gathering of "product," or terminal, information so that an administrative decision can be made.

The first section of this chapter provides suggested guidelines for ascertaining whether a student should: (1) be returned to the unrestricted program; (2) continue in the Developmental Program with the same prescription; (3) continue in the Developmental Program with a modified prescription; or (4) be scheduled in the unrestricted program and the Developmental Program. Other sections describe a procedure for informing parents of their child's progress, and provide a summary of the TAPE process based on an actual case study.

SUGGESTED EVALUATIVE GUIDELINES[1]

Individual Evaluation

To evaluate pupil progress properly, it is necessary to review all data collected. The evaluation should be conducted every nine weeks. At each terminal period, the teacher should:

1. Re-administer the Township of Ocean Motor Ability Test
2. Re-administer the Perceptual-Motor Screening Instrument
3. Compute the Motor Ability Index (MAI)
4. Record anecdotal remarks regarding process changes
5. Compare the pre- and post-test objective and subjective appraisals

If a student achieves an MAI score of 50 or more, with no single component stanine score of less than 4, he is to be released from the D&A program. (The mentally retarded or learning disabled child need only attain an MAI of 40, with no stanine score less than 3.) If these minimal standards are not achieved, further evaluation is necessary. Attempt to discern whether the lack of improvement was attributable to improper prescription. If this is the case, determine why the prescriptive tasks did not improve performance. Were the tasks too easy, too difficult, not performed correctly, or not practiced sufficiently? Re-prescribe to correct the problem. If the problem is attributable to poor motivation, then prescribe other tasks which focus on the same factors, but may be more appealing to the student. (See Chapter Six for sequential tasks.) Other approaches to solving the motivation problem: make the tasks more meaningful by having students test one another; record their daily progress; and use any other comparable strategy which enables the pupils to note the concrete benefits derived therefrom.

If the student has not achieved the appropriate MAI score, but shows steady progress toward his goal the teacher may elect to continue the present prescriptive program for another nine weeks. This decision should be based on all data available on the student such as: (1) personal and medical history, as it relates to motor activity; (2) the teacher's subjective observations, and (3) the student's rate of improvement in specific component areas.

---

[1] The teacher should always recognize the fact that evaluation is a continuous process, and cannot be restricted to a precise testing schedule. It might be advisable to retest a student prior to the pre-planned schedule because of his performance. An interim evaluation insures that the individual prescriptive process is being implemented to the fullest extent.

Group Evaluation

In those situations where staff and facility limitations preclude the establishment of a D&A Program (with teacher-pupil ratio of 1-10), every effort should be made to evaluate pupil progress during the regular activity program. The American Alliance for Health, Physical Education and Recreation has formulated guidelines for evaluating the motor development and physical performance of the mentally retarded. Since most children develop motor and physical proficiencies in a similar sequence and progression, the AAHPER guidelines are deemed appropriate for use with children who evidence other types of handicapping conditions.

"A Guide for Evaluating Motor Development and Physical Performance of the Mentally Retarded"[1]

Growth and development, including motor and physical development, follow systematic, regular, and predictable patterns. Each individual passes through various stages of development at his own rate. Skills are developed and specific milestones indicating levels of progress are reached in a given order according to each youngster's physical, psychological, social and emotional characteristics and traits. Readiness for physical activities and motor participation can be determined in various ways – chronological age, mental age, social age, emotional age, skeletal age, physiological age, and anatomical age. Some devices are refined, sophisticated, appropriate and applicable for predicting an individual's ability and potential to perform motor acts. However, many evaluative instruments and scales often are expensive, time consuming to administer, and not available to persons connducting physical education and recreation programs for the mentally retarded.

Often, actually observing youngsters in program activities provides important clues to a child's physical proficiency and motor ability. When observation is tempered with sound professional judgment, personal experience, common sense, and understanding of children in general and the mentally retarded in particular, much can be learned about each youngster's needs and abilities. Activity progressions and sequences thus become a basis for evaluation, diagnosing motor problems, and prescribing appropriate physical activities for each youngster.

In dealing with the mentally retarded, especially young and low functioning children, mental age has been found to be an effective guide in selecting appropriate physical and motor activities. Mental age can also be used to evaluate a retardate's progress and to ascertain skills and abilities that can be expected at different stages. For many mildly (educable) retarded, these stages and milestones can be reached at appropriate chronological ages. Most all children develop movement patterns, motor ability, and physical skills in a similar sequence and progression. The following lists offer some suggestions and guides for evaluating the progress of the mentally retarded in attaining movement patterns, motor skills, and physical proficiency.

Age 6-7[2]

- Can he run in proper form without falling down or running into other children?
- Can he throw bean bags and large balls to himself? to others?
- Can he catch a ball on the first bounce from against a wall? from in the air?
- Can he bounce a ball and catch it?
- Can he jump over low objects? a low rope?
- Can he kick a stationary ball a distance of 10 to 15 feet? Can he keep a ball under control with his feet?
- Can he perform simple imitative walks and movements?
- Can he jump, hop, gallop, and leap correctly? Can he dodge?
- Can he do a front (forward) roll? backward roll?
- Are posture and bearing satisfactory or improving?
- How smoothly and adequately can he handle his body?
- Can he change direction while executing different locomotor movements?
- Can he make quick muscular movements?
- Is he safety conscious?
- Does he enjoy physical activities?

Fig. 5-1 Evaluative Task: Rhythmical Patterning Factor: Gross Body Coordination
(Township of Ocean D&A Program, Wayside School, Wayside, N.J.)

---

[1] Mimeographed material, courtesy of AAHPER and USDHEW (BEH).

[2] Ages can be interpreted in terms of chronological or mental age depending upon functional level of each child.

Age 7-8

- Does he run correctly? Can he pass other runners without colliding?
- Does he react to various types of signals that have different meanings?
- Does he accept the *dare* of certain activity situations?
- Can he change directions quickly to avoid being tagged? stop quickly and change directions?
- Can he throw various objects both underhand and overhand?
- Are accuracy and distance improving in his throws?
- Can he receive and throw an object and in so doing transfer weight from one foot to the other?
- Does he have the power to kick a ball greater distances and with improved accuracy? Can he dribble a ball with his feet?
- Can he concentrate and follow an oncoming object with his eyes?
- Can he maintain rhythm?
- Can he execute various movements without losing balance?
- Is he showing accuracy in activities requiring hand-eye coordination?
- Is he developing good posture in a variety of positions?

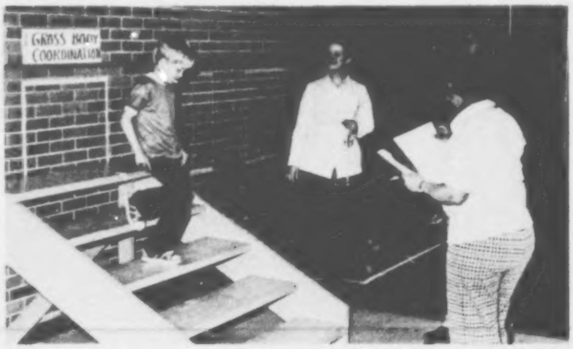


**Fig. 5-2 Evaluative Task: Walking Up and Down Stairs
Factor: Gross Body Coordination**
(Teacher Training Program, West Elem. School, Slayton, Minnesota)

Age 8-9

- Does he have a feeling of rhythmic patterns?
- Are courage and self-assurance being developed? Will he climb to the top of a vertical ladder? to the top of a 12-foot rope? Can he walk a balance beam?
- Has there been an increase in endurance? Can he run a specified distance in a given time?
- Is he developing proper habits in activities such as sitting, walking, and running?
- Is he progressing to the fundamentals of higher organized games?
- Can he serve a volleyball accurately? Are kicks becoming longer and more accurate?
- Can he hit a moving object?

**Fig. 5-3 Evaluative Task: Locomotor Patterning
Factor: Gross Body Coordination**
(Awareness Workshop, State University, Cortland, New York)

- Is experience being gained in ball handling activities?
- Is skill being developed in controlling and manipulating his speed?
- Is dexterity in handling an object increasing?
- Are there obvious improvements and developments in coordinated movements — skills calling for combinations of two or more movements?
- Is dynamic balance improving?
- Are experience and ability in ball manipulations involving timing and accuracy improving?

Age 9-10

- Are body coordination and use of smaller muscles of finer coordination improving?
- Is strength of the arms, legs, and back increasing?
- Can he walk a straight line to test for balance?
- Can he throw a ball properly?
- Is endurance increasing?
- Can he walk a narrow plank, rail, or balance beam? How far?
- Does he take pride in the care and development of his body?
- Does he await his turn in games?
- Are agility and flexibility improving?
- Are timing and rhythm improving as he learns and develops new skills that can be used in various games, sports, and other recreational activities?

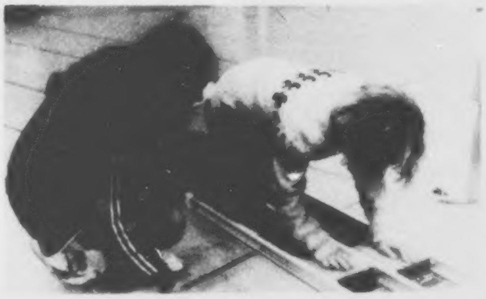


**Fig. 5-4 Evaluative Task: Locomotor Patterning
Factor: Gross Body Coordination**
(Awareness Workshop, State University, Cortland, New York)

Age 10-11

- Are strength, endurance, coordination, agility, flexibility, and balance increasing?
- Is muscular development evident?
- Can motor skill improvement be seen?
- Is rhythm being refined and further developed?
- Are speed and accuracy stressed?
- Is there an increase in the interest in carry-over, life time, and recreational skills?

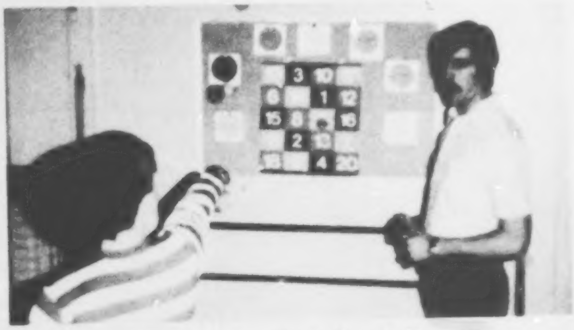


Fig. 5-5 Evaluative Task: Target Throwing
Factor: Eye-Hand Accuracy
(Township of Ocean D&A Program, Wanamassa, N.J.)

Age 11-12

- Are strength and endurance increasing?
- Is he gaining accuracy and experience in games of higher organization?
- Is balance maintained with a variety of movements?
- Does he have quick reactions to changing situations?
- Does he express himself in synchronized movement?
- Are timing and rhythm improving?
- Can he run while controlling two objects?
- Is he gaining in skills that reflect hand-eye coordination?
- Is he developing skill and accuracy involving a moving target?

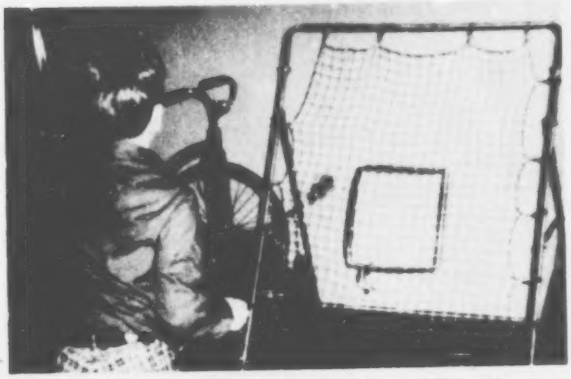


Fig. 5-6 Evaluative Task: Balance-Target Throwing
Factors: Gross Body Balance and Eye-Hand Accuracy
(Township of Ocean D&A Program, Oakhurst School, Oakhurst, N.J.)

PUPIL PROGRESS REPORT TO PARENTS

It is important that parents be made aware of the progress of their child in the Developmental Physical Education Program. Table 5-1 provides a suggested format for reporting to parents as a means of indicating the progress the child makes in terms of each test item and each factor. Provision is also made for parental comments and requests for a conference.

TABLE 5-1

MOTOR ABILITY PROGRESS PROFILE

(Courtesy of the Township of Ocean School District)

TEACHER COMMENTS

Your child has completed nine weeks in our Developmental Physical Education program. He has made considerable improvement. However, his retrogression in the eye and hand coordination (from 13 to 10) suggests he would benefit from continuation in the Program.

His performance may be attributable to a vision problem. If his eyes have not been checked lately, it may be advisable to do so at this time.

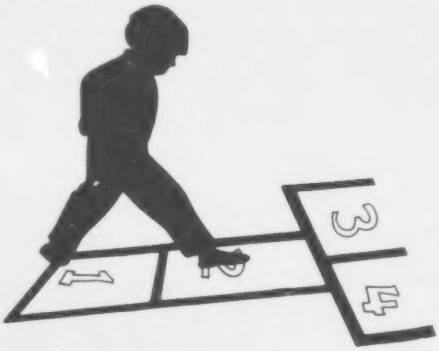
PARENTAL COMMENTS ______________________

____

____

PARENT'S SIGNATURE ______________________

PARENT WISHES CONFERENCE YES ☐ NO ☐



PUPIL John Doe

GRADE 3 **YEAR** 1974

CLASSROOM TEACHER Mrs. F. June Graf

TABLE 5-1 (Continued)

TEST ITEM	Highest Possible Score	PRE-TEST Your Child's Score	POST-TEST Your Child's Score
Gross Body Coordination			
1. Walk	2	2	2
2. Creep	2	1	2
3. Climb-stairs	2	2	2
4. Skip	2	1	1
5. March-in-place	2	1	2
Total Maximum Points	10	7	9
Balance and Postural Orientation			
1. Stand – both feet (15 sec.)	3	1	3
2. Stand – right foot (15 sec.)	3	1	2
3. Stand – left foot (15 sec.)	3	1	1
4. Jump – one foot leading	3	2	3
5. Jump – both feet simultaneously	3	1	2
6. Hop – both feet	3	1	3
7. Hop – right foot	3	1	3
8. Hop – left foot	3	1	2
Total Maximum Points	24	9	19
Eye and Hand Coordination			
1. Catch	3	2	2
2. Ball bounce and catch	3	2	3
3. Touch ball swinging laterally	3	3	1
4. Touch ball swinging fore and aft	3	3	1
5. Bat ball with hand	3	2	2
6. Bat ball with bat	3	1	1
Total Maximum Points	18	13	10
Eye and Hand Accuracy			
1. Throw – right hand	9	6	6
2. Throw – left hand	9	3	6
Total Maximum Points	18	9	12
Eye and Foot Accuracy			
1. Kick right foot	9	3	6
2. Kick left foot	9	2	2
Total Maximum Points	18	5	8
Grand Total Maximum Points	**88**	**43**	**58**

Case Study: John was referred for testing by his classroom teacher who noticed he was inordinately clumsy. Upon being tested by the D&A teacher, John scored a 22 on the Motor Ability Test. A parental permission slip was sent home and John was scheduled in the program for two periods a week (80 minutes).

John's prescription focused on gross body coordination, eye and hand coordination, and eye and foot accuracy, items in which he scored very low on the test. After nine weeks John was retested. It was noted that his gross body coordination scores improved significantly; however, his eye and hand coordination retrogressed. As a result of his performance, John's progress report suggested that since his eye and hand coordination did not improve during the nine week period, perhaps it would be advisable to have his eyes checked by an opthalmologist. A change in prescription was implemented with activities focused on John's eye and hand coordination. After nine more weeks John was tested a third time. His composite Motor Ability Index (MAI) rose to 54. Upon the recommendation of the D&A teacher, John was released from the program.

John's case study demonstrates a synthesis of the individualization of a motor activity program via the TAPE process. The process involves: testing; assessing performance; D&A program enrollment, when necessary; prescribing tasks and activities; evaluating performance periodically; and modifying subsequent strategies on the basis of the evaluative results.

Perceptual-motor evaluation of the mentally retarded or learning disabled child should also follow the TAPE process. Where indicated, the Perceptual-Motor Screening Instrument should be administered at nine-week intervals. Keep the medical authorities and the child study team informed of the student's progress. As soon as it is educationally sound, the MR/LD child should be integrated with his peer group on a full-time basis. The decision as to whether the child continues in the D&A Program, or is returned to the unrestricted program should be recommended by the physical educator and approved by the Child Study Team.

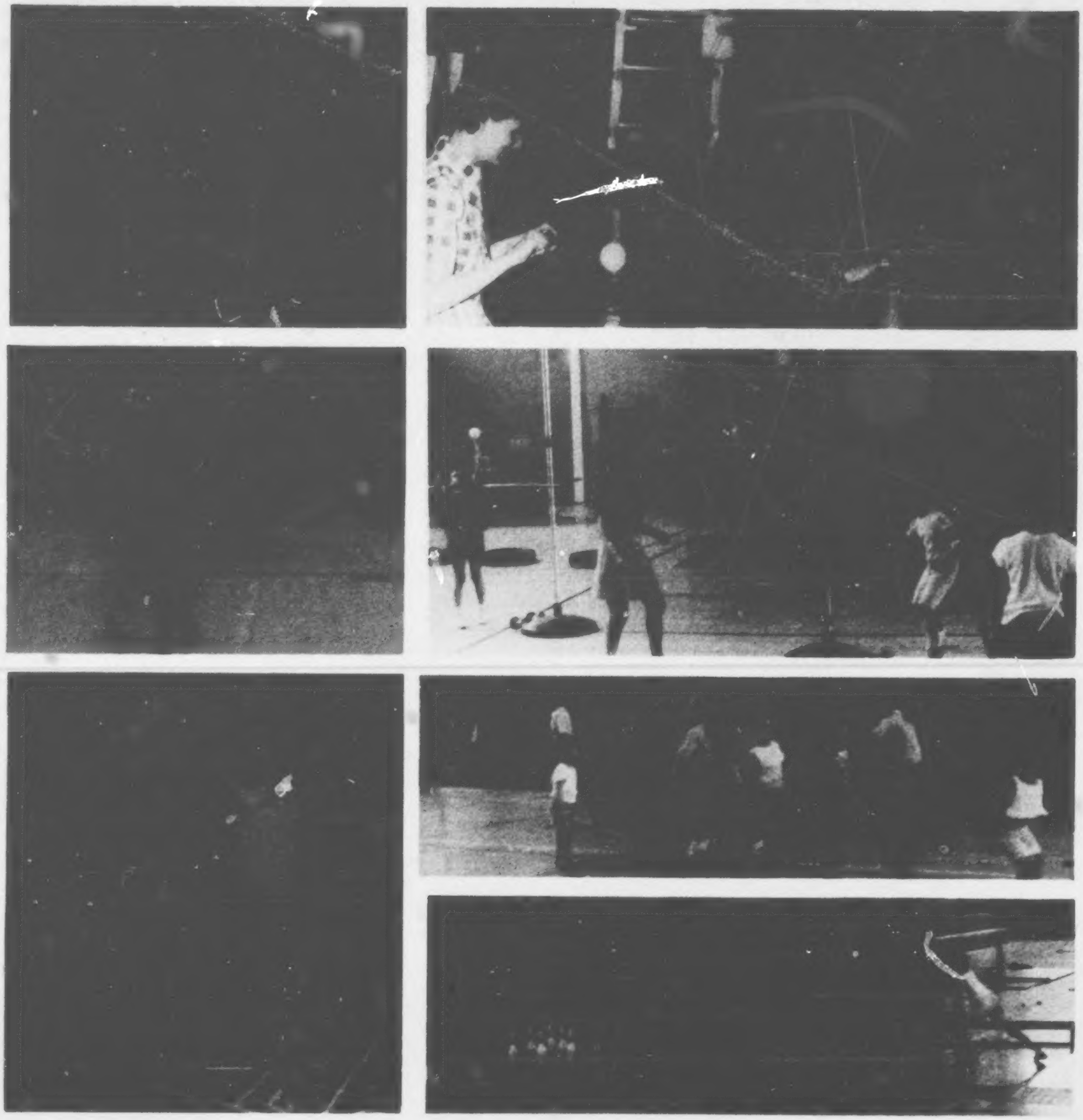
SUMMARY OF THE TAPE PROCESS

The sequence the teacher uses for individualizing instruction involves:

T – Testing the student to gather baseline data
A – Assessing the individual performance of the student
P – Prescribing a sequentially developed program of individualized activities
E – Evaluating student progress at periodic intervals

(Lecture: Formative/Summative Evaluation, Jersey City State College, N.J.)

RESOURCE TASKS AND ACTIVITIES



CHAPTER SIX

RESOURCE TASKS AND ACTIVITIES

The tasks and activities in this chapter are structured to provide a cluster of student learning experiences that will enhance the factors listed in the motor ability test and perceptual-motor screening instrument, for example, gross body coordination and auditory-motor response. As the teacher identifies deficiencies, he need only refer to the appropriate section for prescriptive tasks. Although an effort has been made to sequence the tasks from the simple to the complex, they should be used with discretion. The unique needs of each learner may necessitate modifications either of the tasks, or of their sequential arrangements. The overriding concern of the educator is to *select and prescribe those tasks that will enable each individual to achieve success.*

MOTOR ABILITY FACTORS

Gross Body Coordination

Generally speaking, gross body coordination is the ability of the child to perform specific overall body movements such as creeping, crawling, walking, and hopping. The specific gross motor skills presented to enhance individual performance are walking, creeping, marching-in-place, stair climbing, and skipping.

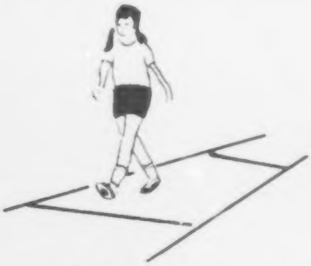


Fig. 6-1 Walk

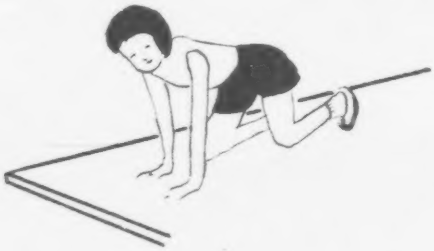


Fig. 6-2 Creep

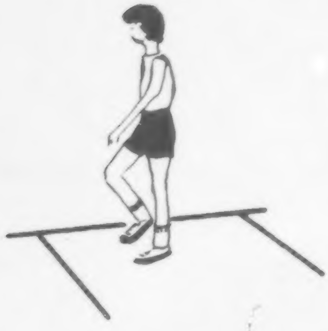


Fig. 6-3 March-In-Place

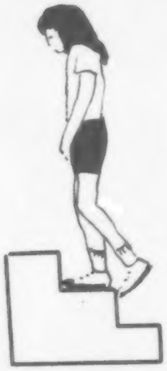


Fig. 6-4 Stair-Climbing

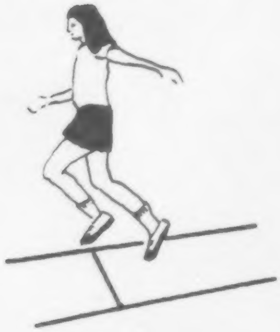


Fig. 6-5 Skip

1. Name: Know Your Body
   Equipment: None
   Description: Ask the child to point to the parts of the body (i.e., the foot, ball of the foot, the toes, the arch, right arm, right leg, left arm, left ankle, right ankle, left knee, and right knee).
   Teaching Hints:
   - Incorporate identification of various parts of the body into game such as "Simple Simon Says."

2. Name: Walking Forward On A Straight Line of Mats[1]
   Equipment: Six one-foot square rubbermats, 4 inch diameter circle painted in the center of each square.

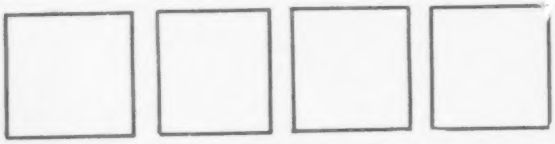


Fig. 6-6 Walking Forward on Straight Line of Mats

Description: Place mats about six inches apart. Have the child step in the center of each mat in sequence until all six mats have been stepped on. Indicate which foot to start with.
Teaching Hints:
- Space mats according to the size of the children.
- Use different colored mats.
- If mats are not available, use any material to construct square such as tape, paper, white shoe polish, etc.
- If the child has trouble differentiating left from right, mark L for left foot and R for right foot.
- Have the child walk backward using same pattern.

3. Name: Walking Forward on Staggered Mats[2]
   Equipment: Same as above.
   Description: Place mats in staggered order. Same procedure as previous task except that steps are not in line.
   Teaching Hints:
   - Same as above.

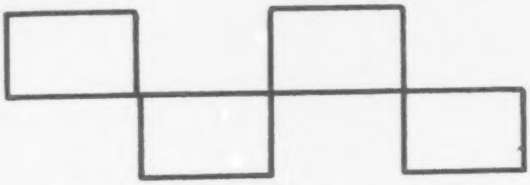


Fig 6-7 Walking Forward on Staggered Mats

4. Name: Walking Forward on Footprints
   Equipment: Make footprints out of whatever materials are available.
   Description: Space footprints in desired pattern for the child to follow. Demonstrate, then have the child perform walking.

---

[1] H.D. Bud Fredericks, et al., *The Teaching Research Motor-Development Scale: For Moderately and Severely Retarded Children*, p. 12

[2] *Ibid*, p. 13.

Teaching Hints:

- Chalk or white shoe polich can be used to diagram footprints.
- Letter footprints L for left foot and R for right foot.
- Have the child walk backwards.
- Change pattern: Example, semi-circle, circle, space footprints further apart, etc.
- Change footprints to stepping stones, bear tracks, etc.

5. Name: Walking Forward
Equipment: Straight line(s) approximately one inch wide.
Description: Have student walk forward on a straight line which is on the floor. The length of the line is predetermined by the teacher.
Teaching Hints:

- Use existing lines on gym floor.
- Use *appropriate* tape, white shoe polish or chalk to construct lines if there are no existing lines on the floor.
- If the child has difficulty with walking on one inch line, use a wider line.
- Have the student walk backward along the line.

6. Name: Knee Walking
Equipment: Small rubber pads.
Description: Children assume knee position. Space rubber mats so that each child can walk on pads using knees.
Teaching Hints:

- Use different color pads.
- Use R for right knee and L for left knee when needed.
- Use child's imagination by traveling through woods, stepping stones over water, etc.

7. Name: Creeping with Handprints
Equipment: Handprints made out of whatever material is accessible.
Description: Have the child assume hands and knees position (creeping stance). Space handprints in desired pattern for child to follow.
Teaching Hints:

- Use imagination in laying out the pattern for children.
- Construct path through simple obstacle course (e.g., a tunnel, low fence to go under, slight incline, slight decline, etc.)

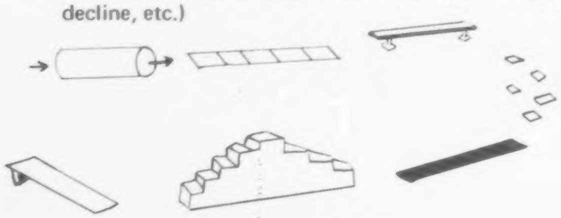


Fig. 6-8 Obstacle Course

8. Name: Directional Creeping
Equipment: Mat
Description: Child assumes hands and knees position (creeping stance) and follows directions of the teacher. Base directions on what the child understands and can perform.
Teaching Hints:

- Be safety conscious.
- Make student(s) safety conscious.

9. Name: Bear Walk
Equipment: Mat
Description: Child assumes hands and knees position. Signal child to move like a bear. Have the child move right leg and right arm and then left leg and left arm. Walk slowly and stress to the child that he is a bear.
Teaching Hints:

- Use child's imagination, for example, walking through the woods.

10. Name: Creeping Backward and Sideward
Equipment: Mat
Description: Child assumes creeping position. Demonstrate how to move backward. Have the child move backward. Demonstrate how to move sidewards. Have the child move sidewards.
Teaching Hints:

- Observe and record homolateral and bilateral problems, i.e., coordinating the use of the extremities on the same side and opposite sides of the body.

11. Name: Creeping Through Obstacle Course.
Description: Use tunnel (rolled up mat), slant board, stepping stones, winding path, circle path, etc. Child assumes and moves in a creeping position through the obstacle course.
Teaching Hints:

- Vary methods used, for example, creep forward, backward crawling, rolling, etc.

12. Name: Marching-in-Place
Equipment: Record or musical instrument.
Description: Explain and demonstrate how to march-in-place. Have the child respond as follows:

- Stand up straight.
- Lift left leg up, hip high, then place left leg on floor.
- Lift right leg up, hip high, then place right leg on floor.
- Up with the left leg and down with the left leg.
- Up right leg on count of one and down on count of two.
- Up left leg on count of three and down on count of four.

Teaching Hints:

- Use slow and fast cadence.
- Have children run in place, then slow down.
- Tell boys they are football players getting in shape.
- Tell girls they are practicing cheerleading.

13. Name: Climbing Stairs
Equipment: Stairs, bench, gymnasium bleachers.
Description: Explain and demonstrate how to climb stairs. Have the child respond as follows:
- Stand up straight.
- Raise right arm and left leg, and plant left foot on landing of first stair.
- Raise left arm and right leg, and plant right leg on landing of second step.
- Continue until all stairs have been completed.
- Have the student climb down the stairs.

Teaching Hints:
- Stress the use of all four limbs.
- Have the child learn to pull up with arms and push with legs.
- Have the child climb in a straight line and keep his body in the direction of the climb.

14. Name: How Many Ways Can We Walk?
Equipment: None
Description: Arrange the children in any formation (e.g., circle, line, or at random). Caution children to avoid colliding with other children. Ask the children, "How many different ways can we walk?" Ask the children to:
- Walk anywhere in the gymnasium without touching anyone.
- Walk backward anywhere in the gymnasium without touching anyone.
- Walk as if you are happy.
- Walk as if you are sad.
- Walk very quietly.
- Walk as if you are carrying a big heavy box.
- Walk as if you are barefoot walking on hot sand.
- Walk as if you are barefoot and walking on pebbles.
- Walk up a steep hill.
- Walk on your toes.
- Walk moving your arms like a bird.
- Walk making yourself as big as you can.

Teaching Hint
- Be safety conscious. Remind the children to be careful and watchful of others.
- Have children work in pairs, then in groups of varying ages.
- Have children think up other ways of walking.
- Devise additional walking variations.

15. Name: Ways to Skip
Equipment: Record or musical instrument.
Description: Arrange the class in the formation desired (i.e., circle, line, or random formation). Ask the children to:
- Skip around the room without touching anyone.
- Skip backwards.
- Skip sidewards.
- Skip as if you are carrying a large package.
- Skip quietly.
- Skip slowly.
- Skip with arms held tight to your side.

Teaching Hints:
- The same hints as suggested for No. 14. The activities suggested for walking and skipping are classified as movement exploration. Additional movement exploration ideas can be found by referring to Basic Movement Education for Children.[1]

16. Name: Mystery Object[2]
Equipment: Mystery Object – e.g., large stuffed animal, cardboard box, etc.
Description: Instruct student to get in crawling position on hands and knees. Have student search for mystery object. Some students may require a sound clue to locate object without frustration.
Teaching Hints:
- This activity works well with a group. See who can be first to locate the mystery object.

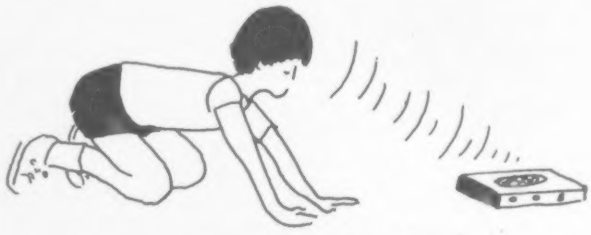


Fig 6-9 Crawling, Auditory Sound

17. Name: Crawling, Auditory Sound
Equipment: Audi-locator, cassette tape recorder or transistor radio.
Description: Instruct student to get in crawling position on hands and knees. Have student crawl to source of sound. Student should move independently.
Teaching Hints:
- This activity works well with a group. See who can be first to locate sound.

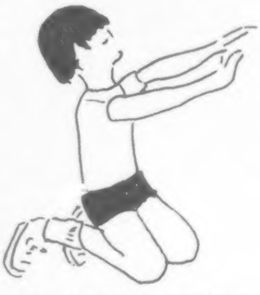


Fig. 6-10 Knee Walking

---

[1] Bonnie L. Gilliom, *Basic Movement Education for Children – Rationale and Teaching Units,* Unit 3, pp. 133-180.

[2] Tasks 16-26 were developed by Maureen Murphy, St. Joseph's School for the Blind, Jersey City, N.J. (Permission to publish granted.)

18. Name: Knee Walking
Equipment: Gym mats
Description: Place two gym mats together lengthwise. Have student kneel on rug with back straight and head upright. Instruct student to walk on knees to end of mats.
Teaching Hints:
Motivation should be provided by placing a "surprise" at the end of the mat – a raisin, toy, or other object of value to the student. This activity may also be done in competition with another student – a knee walking race. Students should be orientated to the end of the mats through sound – e.g., audi-locator, bell, clapping, or teacher's voice.

19. Name: Cross Lateral Walking
Equipment: Strip of rug approximately 3 feet wide to cover length of auditorium.
Description: Instruct student to remove shoes and socks. With an adult on each side of student, instruct student to walk the length of the rug. Adults lightly hold wrists of student and coordinate swing of arms with leg movements. Left foot forward, right arm forward, etc.
Teaching Hints:
This activity is meant to enable the student to experience a free flowing movement pattern in a space which he can trust. After several practice sessions, encourage the student to walk the length of the rug independently while keeping up a steady rhythm. In addition to the rug, a student may be orientated to a sound at the end of the rug.

20. Name: Alternate Arm Swing
Equipment: None
Description: Student stands with back against wall. Arms should be hanging freely at sides, palms touching wall. Instructor stands facing the student. While holding the student's wrists, the instructor establishes the rhythm of alternately swing arms, saying "swing right – swing left" as arms swing forward. As arms swing back, palms should tap wall. When the student has become familiar with the activity, the instructor should establish the rhythm with verbal direction only.
Teaching Hints:
It is important that this activity be done in contact with the wall since it provides the necessary feedback of movement.

21. Name: Running With A Buddy
Equipment: None
Description: Each student is paired with an adult for a "partner race." Student should hold the hand or upper arm of the adult with whom he is paired. Partners are instructed to run towards the sound of the leader's hand clapping.
Teaching Hints:
This is a good group activity. By running with a sighted adult the student is able to experience the speed and free flow of movement involved in "normal" running. The adult's movement assures the student that the environment is a safe one in which to run.

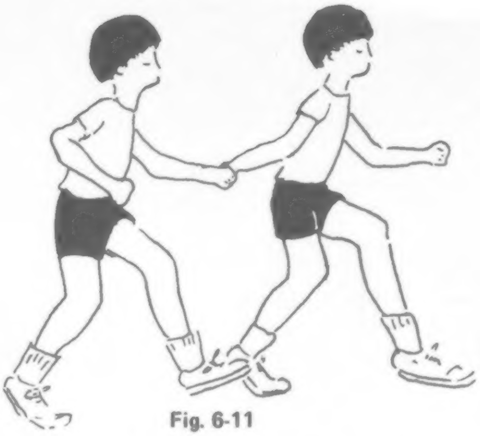


Fig. 6-11

22. Name: Running, Auditory Cue
Equipment: Strip of rug stretching across width of auditorium.
Description: Instruct students to assemble at one end of the room. Leader stands at other end of room behind strip of rug and instructs students to run towards his/her voice until their feet touch the rug.
Teaching Hints:
This activity should follow the one of running with a partner. This is a good group activity – running race.

23. Name: Movement to Sound
Equipment: Percussion instrument to establish rhythm – e.g., drum, triangle, guitar.
Description: Have students listen to rhythms for walking, running, and jumping. At first, instructor should identify rhythm for student – e.g., "Listen to the walking music. Walk towards the music." Once the students can identify the movement to be made for each rhythm place rhythms in sequence – walking, running, jumping – in various combinations. Students should shift movement according to rhythm heard.
Teaching Hints:
This is a good group activity. Students may require verbal reinforcement to know what movement is required by each rhythm.

24. Name: Unilateral Movement
Equipment: None
Description: Student lies on back with arms at sides and feet together. Student is instructed to move one whole side – e.g., right leg and right arm.
Teaching Hints:
Student should be assisted in any way necessary in order that the correct response be made – e.g., programming the correct movement, providing tactual clues, and holding down opposite side. Two adults may be necessary for this activity.

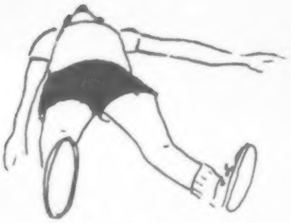


Fig. 6-12

25. Name: Bilateral Movement
    Equipment: None
    Description: Student lies on back with arms at sides and feet together. Instructor holds feet of student and moves them apart and together establishing a rhythm and verbalizing, "out and in." After sufficient practice student performs activity independently to instructor's commands. Follow same procedure with arms, moving them until hands meet together over head. Finally combine arm and leg movements.

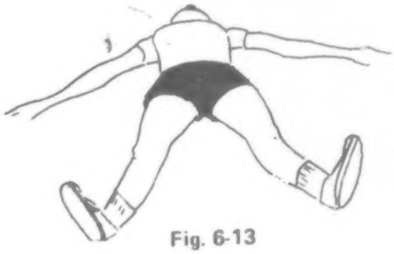


Fig. 6-13

26. Name: Cross Lateral Movement
    Equipment: None
    Description: Student lies on back with arms at sides and feet together. Student is instructed to move left leg and right arm. Student is instructed to move right leg and left arm.
    Teaching Hints:
    Student should be assisted in any way necessary in order that the correct response be made – e.g., programming the correct movement, providing tactile clues, and holding down limbs that are to remain stationary. Two adults may be necessary for this activity.

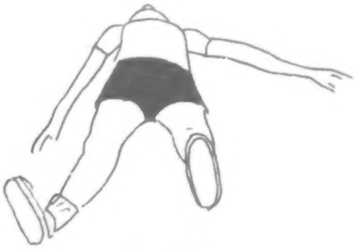


Fig. 6-14

Balance Postural Orientation

Balance is the ability of the child to sustain control of his body when using both sides simultaneously, individually, or alternately.

If a child has good balance, his body can act in an integrated manner, freeing his mind to concentrate on abstract matters.

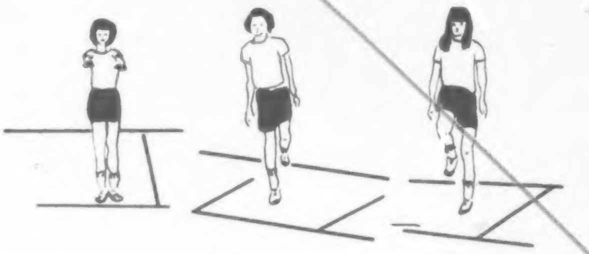


Fig. 6-15 Balance – Two Feet-One Foot

1. Name: Line Stand
   Equipment: Line tape on floor.
   Description: Child stands on a line with feet apart and parallel. Stands on line, feet and heels together.
   Teaching Hints:
   - Foot positions may be drawn on floor with chalk.
2. Name: Seated Balance
   Equipment: Mat
   Description: Child sits legs out, arms resting on thighs. Student should be made to maintain seated balance for increasingly longer periods of time.
   Teaching Hints:
   - Teacher may help the student into balance position.
3. Name: Push Balance
   Equipment: Mat
   Description: Child in sitting position, hands resting on thighs. Gently push the child off balance in each direction. Child regains balance.
   Teaching Hints:
   - Stress shifting body weight to maintain control.
4. Name: Hands, Knees, and Toes Balance
   Equipment: Mat
   Description:
   - Hands – knees – toes touching mat (six point balance).[1]
   - 5-point balance by removing one hand.
   - Remove one hand and one knee (same side).
   - Remove one hand and one knee (opposite side).
   - Remove one hand, one knee, one toe (opposite side – same side).

---

[1] William T. Braley, *Daily Sensorimotor Training Activities*, p. 29.

Teaching Hints:

- Start with simple balance (6 point) and gradually make the task more complex by reducing the points of body contact.

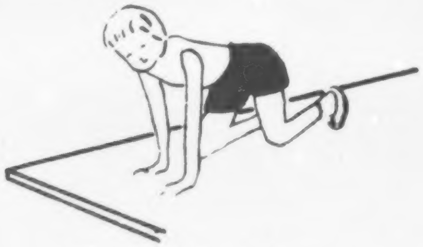


Fig. 6-16 Six-Point Balance

5. Name: Heel-Toe-Balance
   Equipment: Tape or white shoe polish.
   Description: Child stands on a line with the toe of one foot touching the heel of the other foot.
   Teaching Hints:
   Start by using an imaginary line.
6. Name: Tip-Toe-Balance
   Equipment: Mat
   Description: From a standing position, the child raises up on toes. Repeat to see how long the child can maintain the balanced position.
   Teaching Hints:
   Child must have muscle strength to be able to hold balanced position.
7. Name: Step-Through Balance
   Equipment: Hula hoop
   Description: Child holds a hula hoop in front of him with both hands; steps one foot at a time into the hoop, and brings the hoop up and overhead.
   Teaching Hints:
   Initial attempts should be performed on a mat.
8. Name: Elephant Walk
   Equipment: Mats
   Description: Child bends forward from the waist, arms hang limply, hands clasped. Walks forward by taking large steps.
   Teaching Hints:
   - Place three or four mats in a line for a longer balance walk.
9. Name: Egyptian Balance
   Equipment: None
   Description: Child stands feet together, arms straight out, with palms touching. Raises one leg until parallel to floor. Holds position as long as possible.
   Teaching Hints:
   - Raised foot cannot touch opposite leg. Try first attempt with eyes open.
   - Stress body weight is to be shifted to support leg.
   - Stress balancing on right and left foot.

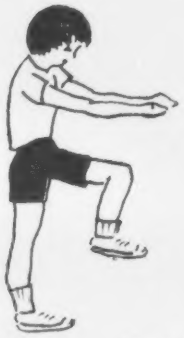


Fig. 6-17 Egyptian Balance

10. Name: Ladder Walks[1]
    Equipment: Ladder and mats
    Description: Lay ladder flat on floor.
    - Child walks forward with one foot on each side of the ladder.
    - Walks forward on right side of ladder.
    - Walks forward on left side of ladder.
    - Walks forward, stepping in the spaces between the rungs.

    Teaching Hints:
    - Instructor may have to help the child by holding his hand and walking him through activity.
11. Name: Jump and Turn
    Equipment: Mat
    Description: Child stands feet together, jumps up, and lands on both feet.[1]
    - Child jumps up and lands on one foot.
    - Jumps up and does one quarter turn, and lands on both feet.
    - Jumps up and does one half turn, and lands on both feet.

    Teaching Hints:
    - Instructor may hold hands of the child and jump with him.
    - Tape marks on floor will aid with one quarter and one half turns.
12. Name: One Foot Balance
    Equipment: Mat
    Description: Child stands on one foot. Holds position for five seconds. Vary tasks – eyes opened and eyes closed.
    Teaching Hints:
    - Change feet.
    - Use arms to help with balance.
13. Name: "V" Sit
    Equipment: Mat
    - Child sits on mat, raises hands and feet off mat, holding balance.

---

[1] William T. Braley et al., *Daily Sensorimotor Activities,* p.40.

- Child sits on mat with legs raised and knees straight.
- Keeps arms straight out and pointed toward toes.
- Locates balance position and holds as long as possible.

Teaching Hints:

- Teacher may assist the child to find balanced position.

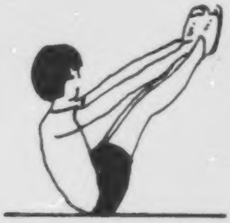


Fig. 6-18 "V" Sit

14. Name: "T" Balance

Equipment: Mat

Description: Child stands on one foot with other leg out behind. Bends forward from waist with arms out front. Holds position.

Teaching Hints:

- If too difficult to be accomplished on mat, try on gym floor, but be sure to have a spotter.
- Stress balancing on right and left foot.

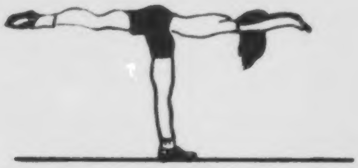


Fig. 6-19 "T" Balance

15. Name: Jump and Balance

Equipment: Bench and mat

Description: Child jumps from low bench and tries to maintain balance upon landing.

- Jump and land in restricted area.

Teaching Hints:

- Teacher may hold the child's hand during the jump if necessary.

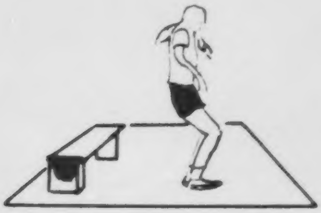


Fig. 6-20 Jump and Balance

16. Name: Cross-Over Walk

Equipment: None

Description:

- Child stands and slides right foot to side, then slides left foot to right. Always keeps right foot leading. Child slides left foot to side, then slides right foot to left. Always keeps left foot leading.
- Child crosses left foot in front of right and continues walking. Always bringing left foot in front.
- Child crosses right foot in front of left and continues walking. Always keeping right foot in front.

Teaching Hints:

- Have the child perform the tasks with eyes open.
- Increase the difficulty level by having the tasks performed with eyes closed.

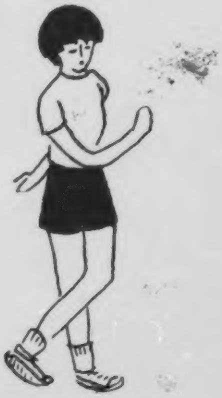


Fig. 6-21 Cross-Over Walk

17. Name: Walking Activities Involving Balance

Equipment: White shoe polish, balloons, plastic bowling pins, beanbags, and chalkboard erasers.

Description: Put a series of circles down on the floor with white shoe polish and have the child walk through the row of circles putting his foot squarely in the middle of each circle. The circles should be about six inches in diameter.

Tasks:

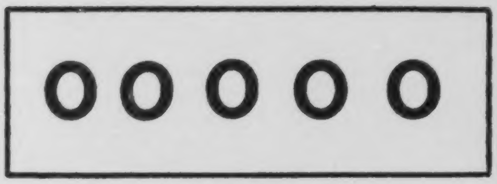


Fig. 6-22 Walk Through Circles

- Walk backward through the circles on your tip toes, keeping your arms out for balance and looking to see where you are going.
- Walk backward and place each foot squarely in the middle of each circle.
- Walk through the circles and at the same time keep batting a balloon in the air over your head.

- Walk through the circles with a beanbag on top of your head.
- Walk forward and backward through the circles on your tip toes with a beanbag on your head.
- Walk through the circles, stop and balance on one foot, and pick up an object that has been placed on one of the circles.
- Stand on one of the circles and perform a "T" balance.
- Stand on one circle and pick up an object, while performing a "T" balance.
- Stand on one circle and balance yourself on one foot, while touching your raised, outstretched leg with both hands.

Teaching Hints:

- Focus eyes on the task.
- Hold arms outstretched to maintain balance.
- Perform tasks slowly.
- Maintain proper body position at all times.

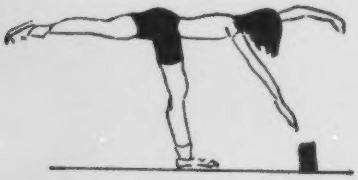


Fig. 6-23 Picking Up An Object

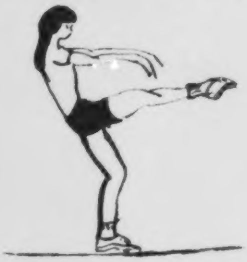


Fig. 6-24 Balance: Touch Leg

18. Name: Walking Activities on a Balance Beam
    Equipment: Balance beam, balloons, plastic bowling pins, chalkboard erasers, beanbags
    Description:
    - Walk across the balance beam.
    - Walk across the balance beam on your tip toes.
    - Walk backward across the balance beam.
    - Walk backward across the balance beam on your tip toes.
    - Walk across the balance beam and at the same time keep batting a balloon in the air over your head.
    - Walk backward across the balance beam and at the same time keep batting a balloon in the air over your head.
    - Walk forward and backward across the beam with your hands held behind your head.

Fig. 6-25 Balance Beam

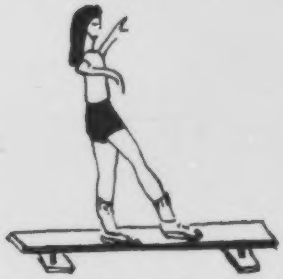


Fig. 6-26 Walking Activities On Balance Beam

- Walk to the middle of the balance beam, stand on one foot, reach over and pick up an object.
- Walk to the middle of the balance beam and pick up an object that is lying on the beam and walk backward to the end of the beam.
- Walk across the beam stepping over objects placed at various intervals on the beam.
- Walk across the beam with an object on your head.
- Walk backward across the beam with an object on your head.
- Stand on one leg in the middle of the balance beam with an object on your head for ten seconds.

Teaching Hints:

- Have the child walk slowly across the beam.
- Be ready to assist the child if he needs help.
- It is a good idea to have the students work in pairs – one performs the task while the other "spots."

19. Name: Balance Activities, Varying Body Positions
    Equipment: Mats, stall bench, white shoe polish, tires
    Description: The child performs the following tasks:
    - Four-point balance (i.e., four parts of the body in contact with four spots on the floor).
    - Three-point balance (e.g., tripod balance).
    - Two-point balance (e.g., squat hand balance, hand balance).
    - A cartwheel.

    Teaching Hints:
    - Preface the unit with strength-building activities.
    - Have all stunts performed, initially, on a mat.

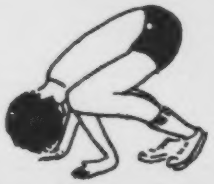


Fig. 6-27 Tripod Balance

- Use "spotters" for the more difficult stunts.
- Stress maintenance of balanced positions for increasingly longer periods of time.
- Emphasize use of a wider base to stabilize the body. Four-, three-, and two-point balance activities: Add creativity by requesting the child devise varying combinations of contact points with spots on the floor.

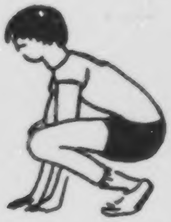


Fig. 6-28 Squat Hand Balance

20. Name: Sitting Posture[1]
    Equipment: Chair and stool
    Description: Instruct student to assume correct posture in chair – student may need to be shown. Have student raise feet from floor until legs are level with the chair. Maintain this posture for approximately ten seconds. Follow same procedure while sitting on stool.
    Teaching Hints:
    This activity provides experience in maintaining balance and postural orientation under unusual circumstances.

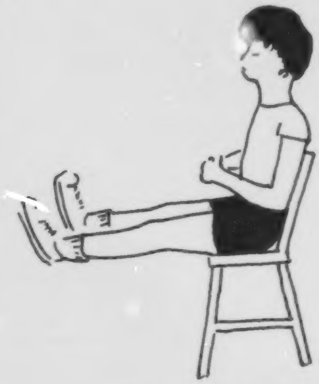


Fig. 6-29 Sitting Posture

21. Name: Sitting, Standing, Walking Posture
    Equipment: Book or bean bag
    Description: Place an object on the head of a student who is in a sitting position. Instruct him to hold still and see how long he can keep the object on his head. Proceed to standing and finally to walking.
    Teaching Hints:
    This activity works well with a group. Have students compete against each other. Students who may be fearful of the book dropping should use bean bags. Bean bags are easier to balance and should be used with students who experience difficulty with this activity.

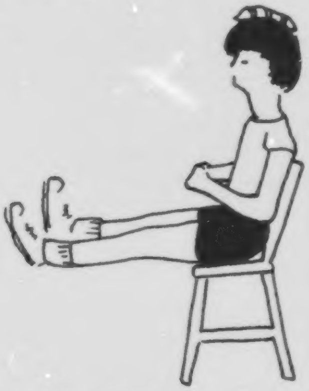


Fig. 6-30 Sitting Posture with Object on Head

22. Name: Rhythmical Swinging
    Equipment: None
    Description: Students stand facing a partner with arms slightly extended. Holding the hands of their partner, they swing their arms from side to side.
    Teaching Hints:
    Swinging should be done in rhythm. A simple song will help to maintain the rhythm established. Feet should be spread slightly (approximately 6 inches) to provide better balance.

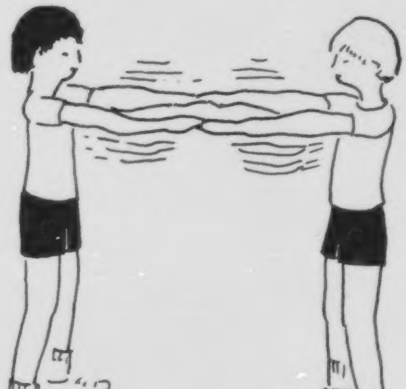


Fig. 6-31 Rhythmical Swinging

23. Name: Wall Exercising
    Equipment: None
    Description: Child stands with back touching wall. Instructor recites the following poem, and when necessary, helps the student to perform the action.

---

[1] Tasks 20-31 were devised by Maureen Murphy, St. Joseph's School for the Blind, Jersey City, N.J. (Permission to publish granted.)

We stretch to the ceiling (hands upwards)
And reach out to the wall (arms reach out from sides)
We bend to touch our knees and toes (knees straight)
Then stand up straight and tall. (arms at sides, head up)

Teaching Hints:
Feedback is provided through contact with the wall. Other stretching exercises may be used to develop posture and balance.

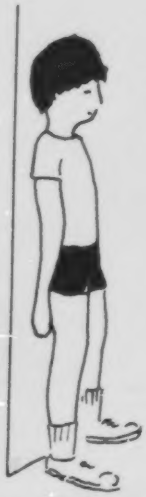


Fig. 6-32 Wall Exercising

24. Name: Rug Walking
Equipment: Strip of rug – length of auditorium
Description: Students should remove shoes and socks. Instruct students to walk on edge of rug – heel to toe.
Teaching Hints:
The edge of the rug can be used for activities similar to those suggested for use on the balance beam – with the element of fear eliminated.

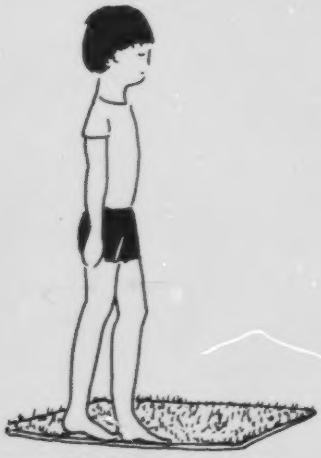


Fig. 6-33 Rug Walking

25. Name: Walking Barefooted
Equipment: Walking boards of graduated widths – 2" x 8", 2" x 6", and 2" x 4" – eight – twelve feet long to be held in brackets 2 inches above floor.
Description: Child should be instructed to feel the texture, width and length of the board. If the board is raised, he should "feel" the space between the floor and the board. In order to provide greater tactile feedback, shoes and socks should be removed. Proceed from wide to narrow, first on floor and then raised. Child should be instructed to walk forward (heel to toe), backward (toe to heel), and to the side, in that sequence.
Teaching Hints:
If a child experiences difficulty maintaining balance or is fearful, the instructor should assist.

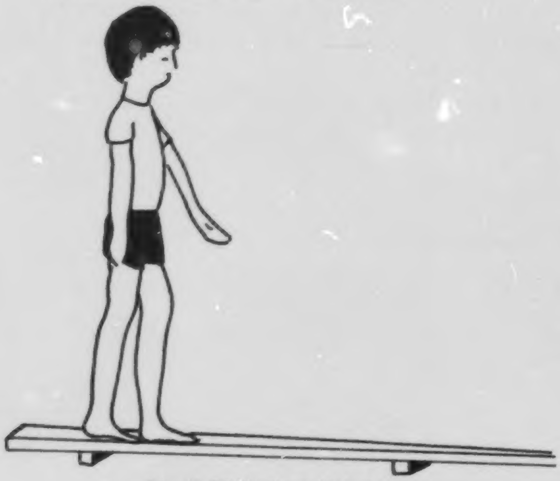


Fig. 6-34 Walking Barefooted

26. Name: Statues
Equipment: Record player
Description: Tell students that they are going to play a game called, "Statues." Explain meaning of word. Instruct students to move in unusual positions to the music. Various possibilities should be shown them by putting them through the motions. When music stops, students are to become "statues" and maintain position for approximately ten seconds.
Teaching Hints:
This activity works well with a group. Any appropriate music may be used.

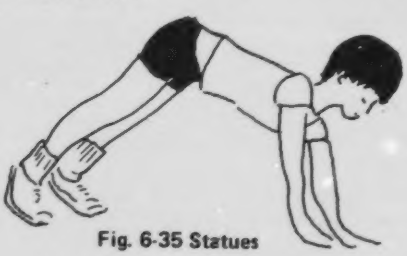


Fig. 6-35 Statues

27. Name: Animals in a Zoo
Equipment: Record player – "Animals in the Zoo" record.[1]
Description: Have students listen to and follow instruction on record. Students should be helped in assuming correct positions.
Teaching Hints:
This is a very enjoyable activity which works well with a group. Freedom of expression should be encouraged by the instructor.

28. Name: Loss of Balance
Equipment: Gym mats
Description: Present this activity as a lesson in safety. Discuss prevention of falls and what happens when people do fall. Teach child to brace his fall and protect his head by extending his arms to floor if falling in a forward position. If falling backwards, teach student to fall on lower half of body, and again to use his arms and hands for protection.
Teaching Hints:
Put a child through motions of falling showing him how to protect himself. Have child practice on gym mat. This activity provides very practical experience and the response of the students has been positive. All safety precautions should be taken to prevent a child from getting hurt during this activity.

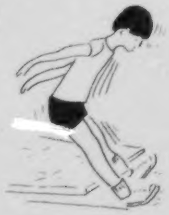


Fig. 6-36 Safety Tasks

29. Name: Bunny Hop
Equipment: Record player – "Bunny-hop" record.
Description: Students should listen to song and be instructed to jump or hop (if they are able) at appropriate places throughout the song.
Teaching Hints:
Students should first be instructed to jump in place. If they are able to jump in place, they should be taught to jump forward by holding hand or upper arm of adult who performs action. A rug may be placed 6-12 inches away from the student to provide feedback of having jumped forward onto the rug. Backward jump should be taught in the same way. Students who are learning to hop should hold onto the back of a chair for balance until they are able to hop independently.

30. Name: Jumping From A Height
Equipment: Large wooden blocks or platform approximately six inches high.
Description: Instruct student to feel the distance from the block to the floor. Instruct student to stand on the block and to jump off while holding the instructor's hands. After sufficient practice, encourage the student to jump independently.
Teaching Hints:
As the student becomes more confident, height should be increased up to twelve inches. Feet should remain in landing position after jumping.

31. Name: Balance on One Foot
Equipment: Parallel bars or chair
Description: Instruct student to hold onto parallel bars or back of chair and raise right foot. Tell student to try to keep foot raised while you count to 15 – approximately 15 seconds. Provide positive reinforcement for effort and success. Follow same procedure with left foot.
Teaching Hints:
As student's skill increases, (when he can keep his foot raised for 15 seconds while holding), have him attempt task without holding.

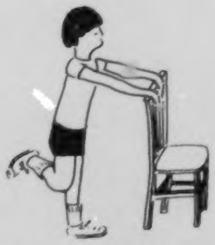


Fig. 6-37 One-Foot Balance

32. Name: Balance Walk[1]
Equipment: Two medicine balls or wooden squares (4" x 4").
Description: The student mounts the two supports and proceeds by:
- Shifting body weight to a one-footed balance.
- Sliding one ball ahead of the other.
- Repeats until a specific destination is reached.

Teaching Hints:
- Stress concentration on body control and destination.
- Use medicine balls which are soft and pliable, or cigar boxes as an alternative.
- Conduct competitive events such as relay racing after the students acquire the basic skills required by the task.

---

[1] Play and Learn – Games and Dances Set, P.O. Box 415, Highland Park, Illinois.

[1] Devised by Jerry Hauselt, Township of Ocean School District, Wanamassa School, Ocean, N.J.

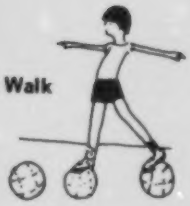


Fig. 6-38 Balance Walk

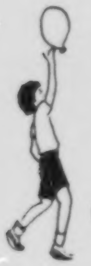


Fig. 6-39 Playing With Balloons

Eye-Hand Coordination

Eye and hand coordination involves the integration of both body parts so that the eyes visually steer the hands through space to accomplish a given task. Almost all tasks and activities may be found in one, or a combination of, three categories, that are presented here.

These categories of eye and hand coordination are throwing, catching and striking. The tasks and activities described here provide experience in each of the three categories. The activities selected should be based on the needs of the individual student as determined by the objective and subjective assessment.

1. Name: Leadup for Throwing[1]
   Equipment: One whiffleball on a string per two students, or ball hanging from string on a fixed structure.
   Description:
   - One partner holds a string with a softball size whiffleball at approximate eye level of his partner. Active partner stands in astride position facing the ball — with his throwing shoulder lined up with the ball.
   - (For right handed thrower) right leg is back — right arm prepared to throw.
   - Left leg is forward — left arm is raised forward in horizontal position pointing to the ball.
   - Student hits stationary ball with right hand.
   - Student hits ball with right hand and flings left arm to the rear.
   - Student hits ball with right hand and steps with left foot (simultaneously) as left arm is flung rearward.

   Teaching Hints:
   - Stress development of the total bilateral competency via throwing right and left-handed.
2. Name: Playing with Balloons
   Equipment: One balloon per student.
   Description:
   - Throw balloon in the air (underhanded) and catch it upon return.
   - Repeat task while throwing and catching with the right and left hand.
   - Attempt to keep the balloon in the air by tapping it with one or two hands.
   - Tap the balloon in the air and call out the name of another student who must tap the balloon.[2]
   - Tap the balloon against a wall.

   Teaching Hints:
   - "Control" the balloon by gently tapping rather than striking.
   - Keep eyes on the balloon at all times.
   - Devote equal time to developing the use of the right and left hand.
3. Name: Tapping and Catching A Whiffleball (Partners)
   Equipment: One whiffleball (softball size) on a string for every two students (string approximately 12" 18" long).
   Description: A whiffleball is suspended between two partners (approximately midchest level).
   - Pass the ball back and forth and catch with two hands, one hand, and alternate hands.
   - Tap the ball back and forth with right hand, left hand, and alternate hands.

   Teaching Hints:
   - Use woolen ball.
   - Vary arc of the ball to increase difficulty of catching and striking.
   - Relax as you catch the ball.
   - Develop use of both hands.

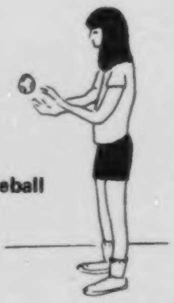


Fig. 6-40 Catching Whiffleball

4. Name: Tapping Whiffleball (Swing or Push Style)[3]
   Equipment: One whiffleball for every two students. One rod (wand, dowel, etc.)
   Description: Partners stand scattered (facing each other). One partner holds the whiffleball on a string while the other partner holds a rod, wand, etc. The rod is held with one hand at each end.

---

[1] Developed by Lawrence A. Guarino, Physical Education Teacher, Chancellor School, Newark, N.J.

[2] William T. Braley et al., *Daily Sensorimotor Training Activities*, p. 94.

[3] Gerald N. Getman, *Pathway Program 1, Eye-Hand Coordination*, pp. 11-25.

- Partner swings ball toward hitter who strikes ball with the center of the rod by using a pushing motion.
- Partner swings ball and hitter strikes ball on rod near his right hand.
- Hitter strikes ball with rod near left hand.
- Hitter continues to strike ball alternating right, left, or center of the rod.
- Hitter taps ball, holding the rod in a diagonal position with left hand up and right hand down.
- Hitter keeps this position and hits with left, center and right section of the rod.
- Hitter changes position so that right hand is up and left hand is down (in opposite diagonal position).
- Hitter strikes ball with right, center, and left portions of the rod.
- Hitter holds rod in a vertical position with the left hand on top and right hand on the bottom.
- Hitter strikes ball with top, center, bottom of rod.
- Hitter reverses position of the hands (i.e., right hand in top position).
- Hitter strikes ball with top, center and bottom of the rod.

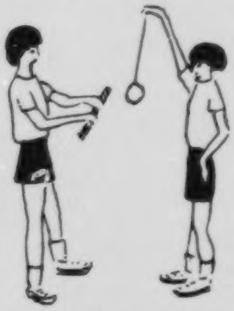


Fig. 6-41 Tapping Whiffleball

5. Name: Batting Whiffleball (Baseball Style)

   Equipment: One paddle. One bat and whiffleball on a string for every two students. One plastic bat or wand, dowel, etc.

   Description: Partners facing each other (standing). One partner holds a whiffleball on 12" - 18" string. The other partner holds a paddle (bat, wand, etc.) with two hands, then left and right hand.

   - Partner swings ball towards the other partner who strikes the ball with the bat held vertically.
   - Hitter strikes the ball, holding bat horizontal to floor.
   - Hitter strikes swinging ball with right hand, left hand (using vertical swing and horizontal swing).
   - Partner with bat now stands sideways to swinger.
   - Hitter strikes ball with near hand (backhand).
   - Batter hits ball with far hand (using horizontal swing).
   - Batter hits ball using both hands, holding bat baseball style.
   - As batter becomes more proficient he hits ball baseball style with extended arms.

   Teaching Hints:

   - ■ Use large ball at first, then gradually smaller ones.
   - ■ Paddles or large surface striking implements should be utilized first. Also should be light for quicker swing.
   - ■ As batter improves use thinner implement.

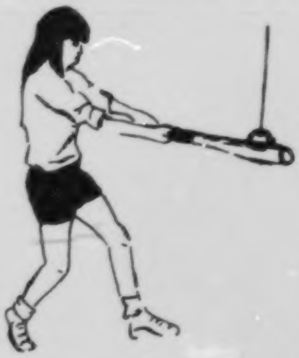


Fig. 6-42 Batting Whiffleball

6. Name: Batting[1]

   Equipment: One bat per each group of students. One large ball, one medium size and one small size. One batting "T" or traffic cone.

   Description: One student at bat, others scattered to retrieve balls.

   - Using a regular batting stance, student hits stationary ball on ground in front of him.
   - Child hits ball off of a batting "T."
   - Child bats a ball that is bounced to him.
   - Child hits a large ball pitched to him (no bounce).

   Teaching Hints:

   Sequence the four tasks as follows:

   - ■ Bat with large hitting surface to bat with small hitting surface.
   - ■ Large ball to small ball.
   - ■ Stationary ball, slow rolling ball, bouncing ball to pitched ball (no bounce).

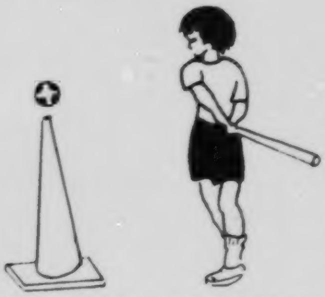


Fig. 6-43 Batting "T" Practice

---

[1] Bryant J. Cratty, *Motor Activity and the Education of Retardates*, pp. 147-8.

7. Name: Serving

Equipment: One ball per student; one paddle per student; one balloon per student.

Description: Stand facing the wall (5-10 feet); the distance from wall will vary with age and size of student. (Description is for a right-handed person.)

- With an underhand swing, hit balloon (ball) towards the wall (with your right hand, palm open, first – then with fist – palm facing wall.)
- Repeat taking a step forward with your left (front) foot.
- Using a paddle, repeat the underhand serve (palm forward.)
- Hit balloon (ball) with overhand stroke (serve) towards wall.
- Repeat overhand stroke with body (legs) in astride position.
- Throw ball in the air with an underhand toss and tap it towards the wall with both hands palms facing upward.

Teaching Hints:

- Use balloons or whiffleballs for beginners and very young students.
- Use large size balls first, then reduce size.
- Use light paddles if possible.

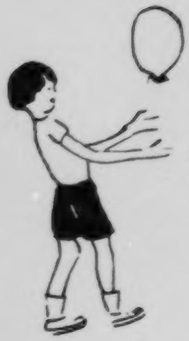


Fig. 6-44
Underhand

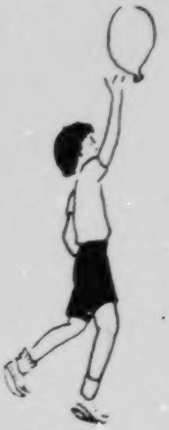


Fig. 6-45
Overhand

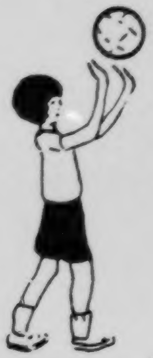


Fig. 6-46
Two Hands

8. Name: Ball Rolling

Equipment: One ball for each student.

Description: Straddle-sitting position.

- Roll the ball to the left side, to the right side using both hands as a guide.
- Roll the ball towards your left leg, and stop it with your left hand.
- Repeat to the right side.
- Roll the ball back and forth (side to side) pushing with one hand and stopping it with the other.
- Roll the ball towards you, using both hands.
- Roll it away from you, using two hands.
- Roll it towards you, using one hand.
- Roll it away from you, using the other hand.
- Roll the ball towards you, and then away from you, using the right and left hand.

Teaching Hints:

- Stress keeping eyes on the ball at all times.
- Progress from moving the head and eyes to follow the ball to keeping the head motionless while following the ball.
- Use yarn ball, fluff ball, or styrofoam ball.

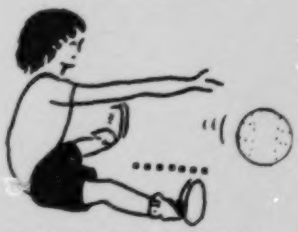


Fig. 6-47 Ball Rolling, Straddle-Sitting Position

9. Name: Ball Rolling (Pushing)[1]

Equipment: One ball per student

Description:

- Sitting, tuck position: Roll the ball around your body, roll the ball in and out of your legs.
- Kneeling: Roll the ball around you in a circle, first to the left, then to the right.
- Roll the ball in between your legs and around you.
- Roll the ball to a line and trap it with your hands.
- Roll the ball in and out of a row of bowling pins or any obstacle course (using one hand).
- Roll the ball at a target using one hand (bowling pin).
- Roll the ball and try to hit a target on the wall (using one hand).
- Roll the ball and try to push it so it rolls into a target (e.g., wastepaper basket).

Teaching Hints:

- Stress pushing the ball slowly to maintain control.
- Emphasize use of right and left hand.

10. Name: Rolling and Trapping Balls

Equipment: One ball per student.

Description: Children standing in a line an arms distance apart. A line parallel to the children, 10-15 feet away.

- Roll the ball slowly – walk quickly after it and pick it up.
- Roll the ball faster – run (or trot) after it and pick it up.
- Roll the ball towards the line – run to the line and trap it.
- Roll the ball towards the line – run to the line and pick it up.

---

[1] Erich Marx, *The Ball Primary Book for Schools and Clubs*, p.13.

- Roll the ball toward the line – run to the line, turn your back to the ball and pick up the ball as it passes under your legs.
- Roll ball through an obstacle course, then hit target (or stop it).
- Repeat the same activities, but use a paddle, or hockey stick to propel and stop the ball.

Teaching Hints:

- Stress control and accuracy rather than speed.
- Emphasize "eyes on ball" at all times.

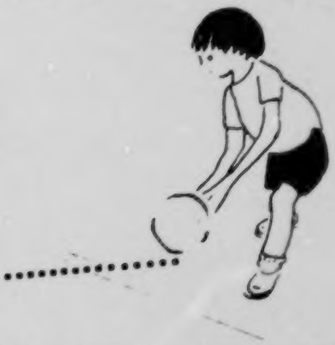


Fig. 6-48 Trapping A Rolling Ball

11. Name: Ball Bouncing[1]

Equipment: One ball for each student.

Description: Straddle-sitting position.

- Hold ball head high – bounce and catch.
- Bounce the ball, catch two times, three, etc.
- Bounce and catch as many times as you can.
- Bounce the ball, catch it high and low.
- Bounce the ball and clap your hands before you catch it.
- Bounce the ball. See how many times you can clap your hands before you catch it.
- Bounce the ball and clap hands on thighs before catching it.
- Throw the ball up (overhead) let it bounce, catch it.
- Throw the ball up again. See how many times you can clap your hands (allowing it to bounce) before you catch it.
- Throw the ball up again. See how many times you can clap your hands before you catch the ball (no bounce).

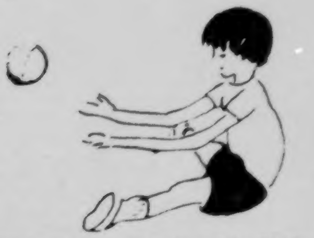


Fig. 6-49 Ball Bouncing Straddle-Sitting Position

Teaching Hints:

- Use bright colored ball (visual stimulus).
- Use balls with bells or other objects in center (auditory).
- Use balls of various sizes and textures (tactile).
- Use music or other rhythmic device to keep time with the bouncing.
- Have the children devise other ball-bouncing activities.

12. Name: Ball Bouncing (Dribbling)

Equipment: One ball for each student.

Description: Standing position.

- Bounce (dribble) the ball with the left hand, the right hand.
- Bounce the ball with alternate hands.
- Dribble the ball high and low (right, left, alternate hands).
- Dribble the ball and walk forward, backward, sideways, etc.
- Dribble the ball high and low as you move around.
- Dribble the ball through an obstacle course.
- Dribble the ball, following a straight line or a circle.
- Dribble the ball and hop, skip, etc.
- Dribble the ball on your right side, left side.
- Dribble the ball around you, first to the left, then to the right.
- Dribble the ball in between your legs and around you.

Teaching Hints:

- Stress pushing rather than batting the ball.
- Emphasize use of both hands.

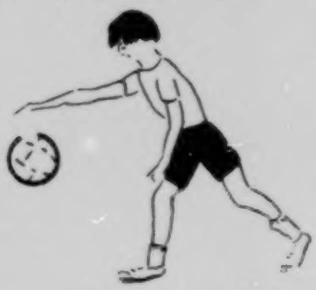


Fig. 6-50 Bouncing Ball

13. Name: Partners Catching

Equipment: One ball for every two students.

Description: Partners straddle-sitting, facing each other (feet touching).

- Hand the ball to your partner – now return – repeat several times keeping eye on the ball (two hands).
- Move away from each other (a little) and again hand the ball back and forth (using two hands).
- Roll the ball back and forth to each other (two hands).

---

[1] Michael J. Hardistry, *Education Through the Games Experience*, p.28.

- Trap the ball before you push it back to your partner.
- Roll the ball with one hand – partner traps it with two hands.
- Roll the ball with the other hand.
- Roll the ball slowly at first, gradually increase speed.
- Push the ball back and forth without stopping it.
- Using two hands, throw the ball on one bounce to your partner.
- Using two hands, throw the ball to your partner without a bounce (underhand or push pass).
- Repeat ab ove tasks from the kneeling and standing positions.

Teaching Hints:

- Use large balls initially.
- Use multi-color balls.
- Use yarn or fluff ball for all the above except bouncing.

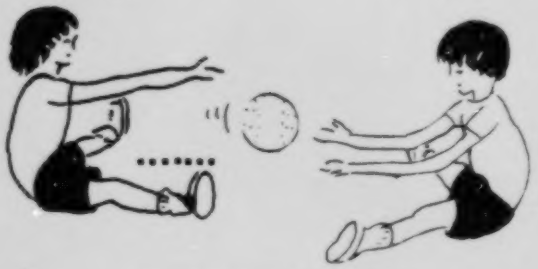


Fig. 6-51 Partners Catching

14. Name: Beanbag Activities[1]

Equipment: One beanbag per child.

Description: Straddle-sitting position.

- Hold the beanbag in both hands, the left hand, the right hand.
- Hold it on the back of one hand, the other.
- Toss it in the air and catch it.
- Toss it in the air and clap your hands before you catch it.
- Throw and catch it with one hand, the other hand.
- Balance the beanbag on your head, elbow, wrist.
- Balance it on other parts of the body.
- Balance the beanbag on your elbow, and toss it up, and catch it. Try the other elbow.
- Throw it up with your hand, but catch it on the back of your head. Try it with the other hand.
- Throw it up in the air with your hand and try to catch it on your elbow.
- Try to catch it on your shoulder.

Teaching Hints:

- Use beanbags of different colors.
- Use vinyl beanbags for easy cleaning.
- Use different shaped beanbags.
- Make your own beanbags.

15. Name: **Beanbag Juggling**

Equipment: One beanbag per student, later two for each student.

Description: Standing, scattered position.

- Balance the beanbag on different parts of your body.
- Walk with the beanbag on your wrist, shoulder, elbow, head, etc.
- With the beanbag on your head and/or on your shoulder(s) walk in a low position.
- Throw the beanbag in the air and catch it with two hands.
- Try catching it with one hand.
- Catch it low to the ground. Catch it high.
- Clap your hands before you catch it.
- Catch it with your wrist, elbow, shoulder.
- Hold a beanbag in each hand; throw them in the air and catch them.
- Catch them on the back of your hands.
- Start with a beanbag in each hand. Throw the beanbag in the air with the left hand. Prior to catching the bag with the right hand, release the beanbag from the right hand to the left hand. After the skill is mastered, juggle back and forth.

Teaching Hints:

- Refer to No. 14.

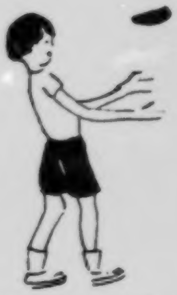


Fig. 6-52 Beanbag Activities

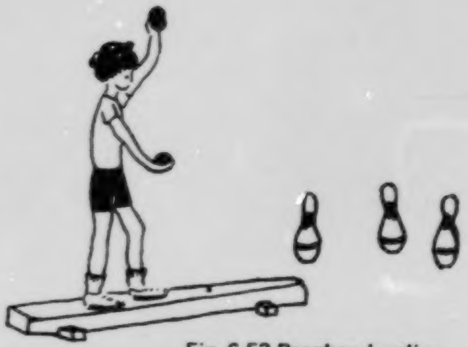


Fig. 6-53 Beanbag Juggling

---

[1] Layne C. Hackett, *Movement Exploration and Games for the Mentally Retarded*, p. 87.

16. **Name: Newcomb–Volleyball**[1]

Equipment: One ball per group, one volleyball net on standards, or rope tied to two posts.

Description: Partners or groups evenly distributed on each side of net.

- Using two hands, throw the ball over the net to your partner. Partner catches it and throws it back (two hands).
- Using two hands, tap the ball over the net. Continue.
- Partner taps the ball in the air twice and then taps to teammate. Continue, increasing the number of taps before passing.
- Partners tap the ball back and forth over the net (immediately upon receipt).

Teaching Hints:

- Use plastic or soft rubber ball to avoid injury.
- Use multi-colored balls.
- Have children devise other variations.

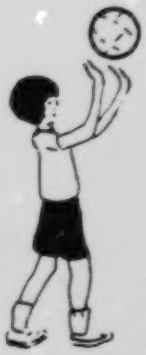


Fig. 6-54 Two-Hand Overhead Tap

17. Name: Patty Cake

Equipment: None

Description: Partners facing each other.

- Clap your hands together.
- Clap your partner's hands (right to left and left to right).
- Clap your hands.
- Clap your right hand to your partner's left hand.
- Clap your hands.
- Clap your left hand to your partner's right hand.
- Clap your hands together.
- Clap your right hand to your partner's right hand.
- Clap your hands.
- Clap your left hand to your partner's left hand.
- Clap your hands.

Teaching Hints:

- Repeat, clapping hands twice.
- Make pattern more complex by including the tapping of thighs.

18. Name: Bear Pull[2]

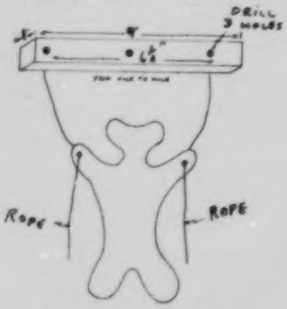
Equipment: One "Bear Pull" setup per child.

Description: The child is requested to pull, alternately, on the left and right rope until the bear climbs to the topmost position. (See Fig. 6-55, for construction specifications.)

Teaching Hints:

- Use to develop eye-hand coordination, laterality and directionality.
- Construct two or more bears and conduct races to stimulate interest.
- Paint the bears different colors to enhance color discrimination.
- Insert numbers and letters to stimulate cognition.

Fig. 6-55 Bear Pull



19. Name: "Stamp Up"[3]

Equipment: One footboard for each two children and several assorted sizes and/or colored beanbags. May also use deck tennis rings and wands.

Description: Two students take positions at opposite ends of the footboard. One student is the "stamper" and the other student is the "catcher." The stamper places the beanbag at the end of the board and stamps the other end. The catcher tries to catch the beanbag before it hits the floor. Variations:

- Catch more than one bag at a time.
- Catch only bags of a certain color from a group.
- Catch with right hand or left hand only.
- Turn 90 degrees and catch.
- Sit, rise to standing position and then catch.
- Catch rings by spearing them with hand or arm.
- Catch rings by using short 8"-12" dowel or baton.
- Do any of the above without a partner.

Teaching Hints:

- Use beanbags of different colors.
- Use beanbags of different sizes and shapes.
- Deck tennis rings increase the level of difficulty.
- Make your own equipment from scrap material.
- Test handedness, reaction time, color discrimination, depth perception, auditory skills, etc., by teacher-directed activities.

---

[1] Marjorie Latchaw and Glen Egstrom, *Human Movement*, pp. 302-303.

[2] Devised by John Connelly, Bureau of Special Services, Jersey City School District, Jersey City, New Jersey.

[3] Tasks 19 and 21 devised by Jerry Hauselt, Township of Ocean School District, Wanamassa School, Ocean, N.J.

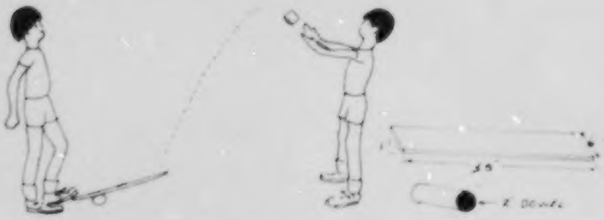


Fig. 6-56 Stamp Up

20. Name: Catch the Ball[1]
    Equipment: Plumber's hand plunger (11"), string, whiffleball.
    Description: Flip the ball into the air and catch it in the plunger cup.
    Scoring variations:
    - The first student to score ten points wins (one point for each catch).
    - The first student to make five consecutive catches wins.

    Teaching Hints:
    - Vary the difficulty of the task by requiring students to grasp the handle at positions "1," "2," and "3."

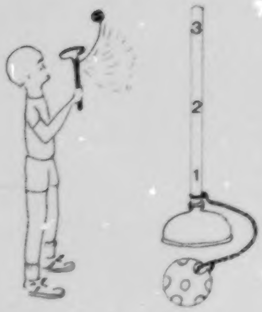


Fig. 6-57 Catch the Ball

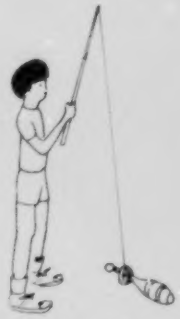


Fig. 6-58 Pin Fishing

21. Name: Pin Fishing
    Equipment: Dowel or stick, string, deck tennis ring, bowling pin.
    Description: Student "fishes" for the neck of the bowling pin in order to lift it to an upright position.
    Variations:
    - Insert letters and numbers on the bowling pins to add cognition to the activity.
    - After the task is mastered, add the competitive element by having students compete against time.

    Teaching Hints:
    - Vary the string length in accordance with the ability level of the student – the shorter the length, the easier the task.

    Note: The length can be shortened by wrapping the extra string around the pole.

Eye-Hand Accuracy

Eye and hand accuracy is directly related to eye and hand coordination. It involves throwing objects at a target, striking (or hitting) objects at a target, and throwing an object by using a tool such as a stick, or scoop. Attempting to knock milk bottles from a table, attempting to throw a ball into a goal as in team handball, and shooting at a basket, are examples of the first category (throwing at a target). Putting as in golf, hitting a hockey puck at a goal, or a forehand stroke in tennis are examples of the second category (hitting an object towards a target). An unusual combination of both categories (throwing, and striking at a target with an implement) occurs in the game of lacrosse when a player throws the ball with a lacrosse stick.

The following tasks and activities provide a number of experiences in the first two categories, throwing an object at a target, and hitting an object at a target with an implement (i.e., bat, paddle, stick, etc.).

1. Name: Throwing for Accuracy
   Equipment: Target (2' square) and, or line on wall five feet from floor: throwing lines on floor 3', 5', 8', 10'. One ball for each student. Large balls for two-handed throwing, smaller balls for one-handed toss. Students standing at least five inches apart from each other (side by side).
   Description: Line formation parallel to wall surface.
   - Throw the ball against the wall above the line and pick it up after it bounces on the floor.
   - Throw the ball against the wall and catch it after hitting the wall but *before* it touches the ground.
   - Throw the ball at the target and pick it up after it bounces, then repeat and catch it on the fly.
   - Gradually, increase the distance from the wall.
   - Change to smaller balls and use one hand throw.
   - Now have pupils form lines one behind the other.
   - Use two hands overhead, for overhead pass. First student throws the ball against the wall and moves to the end of the line as the next student catches it after it bounces.
   - Repeat with student catching it before it bounces (student may have to get closer to the wall and, or throw the ball higher).
   - Repeat activity using smaller ball and one-handed throw.

   Teaching Hints:
   - Teacher could use point system for every successful attempt at hitting target.
   - Vary throwing level (e.g., two hands in front of the face for the chest pass).

2. Name: Ring Toss
   Equipment: Rubber rings and dowels that stand upright.
   Description:

---

[1] Developed by David Enderly, Wanamassa School, Ocean, N.J.

- Students throw rings at wooden dowels.
- Task No. 1: Students perform as individuals.
- Task No. 2: Pair students and perform competitively.

Teaching Hints:

- Vary distance of dowels in accordance with individual abilities.
- Stress: smooth flowing toss – not power, eyes constantly on the target. Bilateral throwing: step with left foot and toss with right hand, or step with right foot and toss with left hand.

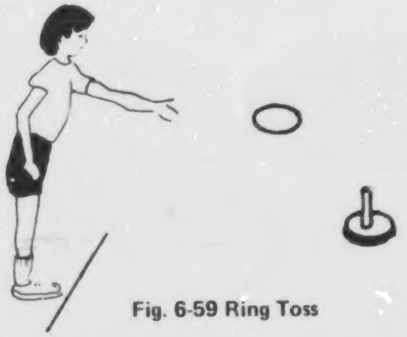


Fig. 6-59 Ring Toss

3. Name: Rubber Horseshoes

   Equipment: Rubber horseshoes and dowels that stand upright.

   Description:

   - Perform the same as description No. 2 above.

   Teaching Hints:

   - Refer to No. 2 above.

4. Name: Partners and Targets[1]

   Equipment: Hoops, ropes, beanbags, or lines on the floor. One ball for every two students.

   Description: Partners facing each other with a target between them on the floor.

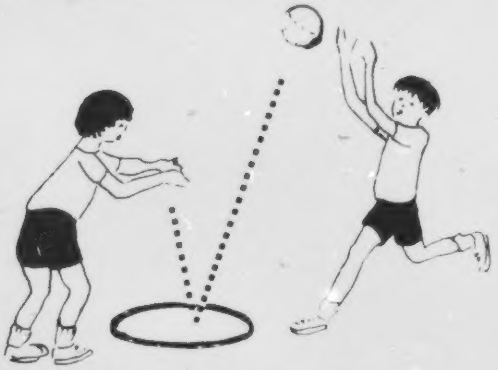


Fig. 6-60 Partners Throw Ball At A Target

- One partner (A) throws a ball at the target (with two hands).
- Other partner (B) catches the ball after it bounces.
- Other partner (B) throws the ball at the target and partner (A) catches it.
- Repeat using smaller ball, throwing with one hand.

Teaching Hints:

- Have points scored every time student hits the target.

5. Name: Group and Team Games.[2] Throwing at a Target Ball

   Equipment: One large ball (or movable target); one small ball per student.

   Description: Two teams approximately ten feet apart with team members standing side by side facing the other team. A ball is placed on the floor halfway between each team.

   - Pupils throw their balls at the larger ball.
   - Objective is to hit the ball so that it rolls to the other team.
   - Students retrieve balls thrown by the other team.
   - Repeat throwing until large ball rolls on, or beyond, either team line.

   Teaching Hints:

   - Score points for every hit.
   - Have another pupil or teacher roll the large ball laterally.
   - Students try to hit moving target.

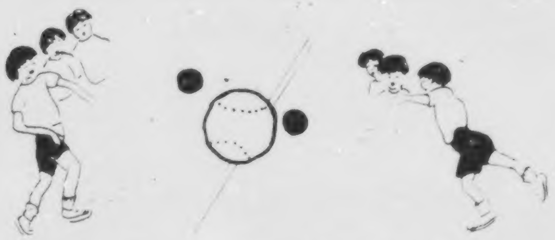


Fig. 6-61 Teams Throwing At A Moving Target

6. Name: Groups and Target[3]

   Equipment: One hoop for every three students. One ball for every three students.

   Description: Students standing three in a line with student in middle holding a hoop in front of him.

   - One of the outside students throws the ball through the hoop.
   - The other outside student catches ball on the bounce.
   - He throws the ball through the hoop.
   - Middle student holds the hoop at various heights.
   - Students can use overhand and underhand throw.

---

[1] Erich Marx, *The Ball Primary Book for Schools and Clubs*, p. 25.

[2] Erich Marx, *The Ball Primary Book for Schools and Clubs*, p. 28.

[3] Erich Marx, *The Ball Primary Book for Schools and Clubs*, p. 30.

Teaching Hints:
- Vary size of the ball and hoop.
- Use beanbags and other throwing objects.
- Award points when ball passes through hoop.

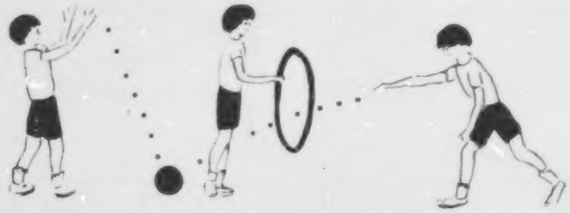


Fig. 6-62 Throwing Through A Hoop

7. Name: Grid-Tossing Game[1]

Equipment: One beanbag per student; one hoop per group; paperbasket, or floor grid for target.

Description: Individuals scattered or grouped in a circle with hoop in center. Groups in line side by side facing hoop.

Hoops and Grids:
- Student stands near hoop and throws beanbag in hoop.
- Student moves back a few steps and repeats.
- Student should use both overhand and underhand toss.
- Student should use shot-put basketball type throw.

Baskets:
- Repeat the above with a basket instead of a hoop.
- Student moves back gradually
- Use large baskets at first with small balls.
- Use smaller size baskets with larger balls.
- Raise targets (baskets) to various heights to approximate height of pupils.

Teaching Hints:
- Have students use two hands when throwing.
- Have students use one hand.
- Vary by having students toss beanbags at specific numerals on floor grids.

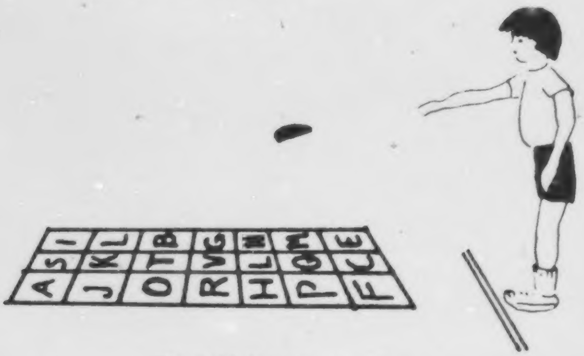

A J O R H P F
S K T V L Q C
I L B G N M E

Fig. 6-63 Grid-Tossing Game

8. Name: Throwing at Targets[2]

Equipment: One beanbag or ball per student; one target (clown with holes for mouth, eyes and nose).

Description: Scattered, or on a line side by side facing target.
- Throw beanbag at large holes, then smaller holes.
- Move back and try to throw beanbag into openings.
- Use various throws underhanded, overhand, sidearm, shotput, basketball type.
- Have students devise their own way to throw at the target.

Teaching Hints:
- Use balls after the beanbags.
- Use other types of throwing objects: fluffballs; whiffleballs; etc.

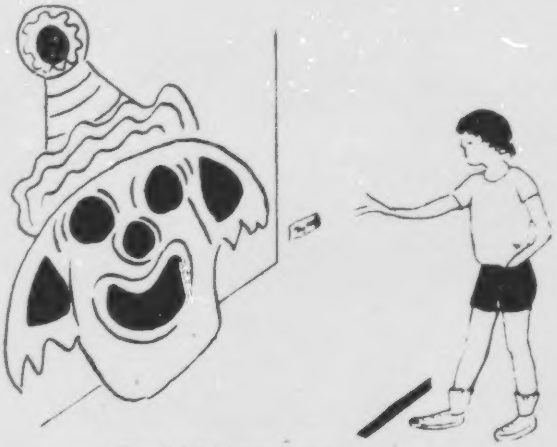


Fig. 6-64 Clown Target Face

9. Name: Hitting for Accuracy

Equipment: One ball per student, one bat (or similar tool) per student. One target cone, beanbags, etc.

Description:
- With ball on floor, student hits ball at target using baseball or golf swing.
- Student uses one hand swing first, then two hands.
- Student attempts to hit ball into a target (three or four beanbags forming a circle or square), or opening of traffic cone.
- Raise ball off floor (use small traffic cone) and repeat above tasks.

Teaching Hints:
- Use different size balls.
- Use balls of varying weights.
- Use different type hitting sticks.

---

[1] Bryant J. Cratty, *Active Learning*, p. 99.

[2] Erich Marx, *The Ball Primary Book for Schools and Clubs*, p. 36

10. Name: Hitting for Accuracy Using Circle Games[1]
Equipment: One to three balls per group of students.
Description: Students straddle-sitting in a circle with feet touching. Students straddle-standing in a circle, feet touching.

Sitting:

- Six to eight students in a circle.
- Place one, two, or three balls in the circle. Start with one.
- Students attempt to hit the balls so they touch the legs of the other students.
- Students try to keep the balls from hitting their legs.

Standing:

- Six to eight students standing in a circle.
- Place one to three balls in the circle.
- Students attempt to hit the balls so they go through the legs of other students.
- Students attempt to keep the ball from going through their legs.

Teaching Hints:

- Vary by having students kneel, or squat in a circle.
- Begin the activity with one ball, then two, and three.
- Use large balls first, then smaller ones.

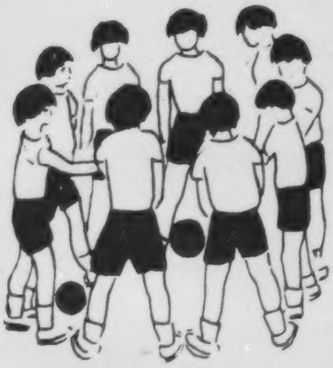


Fig. 6-65 Circle Game

11. Name: Shoot the Puck[1]
Equipment: Floor hockey stick, pucks, target.
Description: The students take turns shooting at the target from varying distances, depending upon age and skill level. The players take ten shots each and the highest score wins.

Teaching Hints:

- Stress smooth, even delivery to enhance accuracy.
- Vary the experience by placing bowling pins behind each opening.

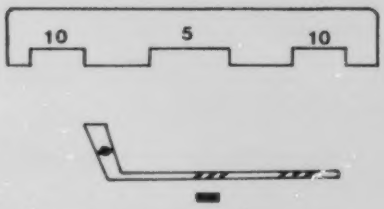


Fig. 6-66 Shoot the Puck

12. Name: Pitch Back Beanbag Throw
Equipment: Pitch back target, wastepaper basket, beanbags.
Description: Starting six to twelve feet from the pitch back, students are given thirty seconds to rebound as many beanbags as possible of the pitch back and into the wastepaper basket.

Teaching Hints:

- Vary the experience by modifying the distance, and the rebound angle of, the pitch back.

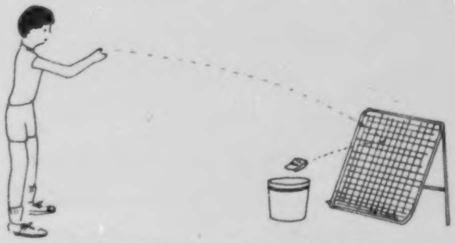


Fig. 6-67 Pitch Back Beanbag Throw

13. Name: Magnetic Fishing
Equipment: Poles, strings, magnets, paper fish, paper clips.
Description: Each student is given one minute to catch as many "fish" as possible from the fishing pond. (Attach a paper clip to each fish, prior to placing the fish in the pond.)

Teaching Hints:

- Construction paper of different colors enhances color discrimination.
- Insert numbers on the fish to include number discrimination and mathematics skills.

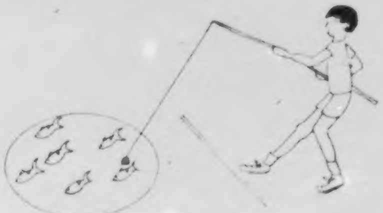


Fig. 6-68 Magnetic Fishing

---

[1] Activity numbers 11-13 are courtesy of Fred West, Ocean Township Elementary School, Oakhurst, New Jersey.

Fig. 6-69 Squirt Them Down

14. Name: "Squirt Them Down"[1]
Equipment: Household cleaner type squirt bottle, colored golf tees.
Description: Set golf tees upside down at varying distances; the object:
    - The students aim and try to knock down as many tees as possible, without refilling the bottle.

    Teaching Hints:
    - Initially, set up tees in close proximity to the student to insure success.
    - Use tees of different colors to enhance color discrimination.
    - Stimulate motor-cognition by taping letters and numbers on the golf tees.

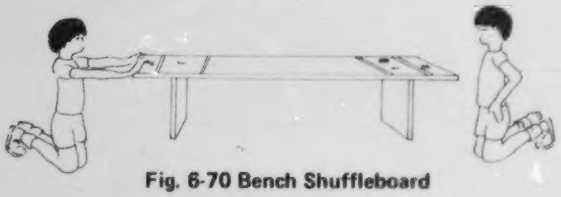


Fig. 6-70 Bench Shuffleboard

15. Name: Bench Shuffleboard
Equipment: Six-foot bench, plastic hockey puck or round disc.
Description: One student at each end of the bench propels a disc back and forth. The first student to score 21 or more points wins the game.
Teaching Hints:
    - Repeated poor performance may be indicative of a depth perception problem.
    - Increase the length of the bench to make the task more difficult.
    - Wax the bench surface to minimize friction.

EYE-FOOT ACCURACY

Eye and foot accuracy involves the integration of both body parts so that the eyes visually steer each foot through space to strike given objects. The main areas involved in this activity are striking (kicking) with the foot and hitting a predetermined area or target. The tasks and activities in this section provide a sequential approach to strengthening the integrated response.

1. Name: Spot Walking
Equipment: White shoe polish, rubber rings, playground balls.
Description: Lay down a series of "spots" on the floor with tape or shoe polish. Have the child walk on the spots making sure they step on each one.
Teaching Hints:
    - Demonstrate how you want it done.
    - Walk the child through the spots emphasizing that he must touch each one.
    - Have the child walk on his toes.

2. Name: Wall Spot Touching
Equipment: Tape or white shoe polish.
Description: Put a row of three spots on the wall six inches apart. The height of the spots should be about three feet, or whatever is appropriate for the child.
    - Have the child lie on his back and hold his leg up in the air so that his foot is about six inches away from the middle spot on the wall.
    - On command have the child alternately touch the left, middle and right spots on the wall.

    Teaching Hints:
    - Have the child touch the spots with his toes.
    - Have the child touch the spots with his heels.
    - Have the child use both feet.

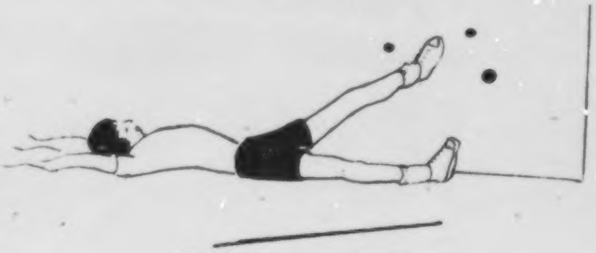


Fig. 1 Wall Spot Touching

3. Name: Spot Kicking
Equipment: Shoe polish or tape.
Description: Child stands facing the wall.
    - Put a spot on the wall with either shoe polish or tape.
    - The spot should be about four inches up from the floor.
    - Have the child stand where he is most comfortable and kick the spot with the right foot and left foot.

    Teaching Hints:
    - Initially emphasis should be placed on striking the spot with any part of the front of the foot. Then have the child strike the spot with toe, instep, inside of foot and outside of foot.
    - Proper balance while kicking should also be noted by the teacher.

4. Name: Ball Kick Off Tee
Equipment: Playground ball and rubber ring.
Description: Child stands with ball in front of him.

---

[2] Motor activities numbers 14-15 developed by David Enderly, Wanamassa School, Ocean, New Jersey.

- Put playground ball on a rubber ring.
- The student kicks the ball off the tee (right and left foot).

Teaching Hints:

- Proper kicking form should be emphasized.
- Put a spot on the ball and have the student kick the spot on the ball (no target area involved).

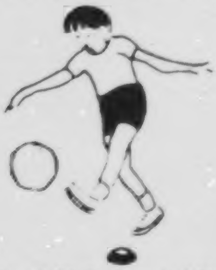


Fig. 6-72 Ball Kick Off Tee

5. Name: Ball Kick to Wall

Equipment: Playground ball, rubber ring, shoe polish or tape.

Description:

- Student, executing proper kicking technique, kicks a playground ball off a rubber ring against a wall.
- Student should try to hit the same general area on the wall (right and left foot).

Teaching Hints:

- The teacher should emphasize proper balance and kicking technique throughout.

6. Name: Ball Kick to Spot on Wall

Equipment: Tape or white shoe polish, playground ball, rubber ring.

Description: A large square (one yard square) is drawn on the wall with either tape or shoe polish.

- Student kicks a playground ball off a rubber ring and hits the square (right and left foot).

Teaching Hints:

- Vary the distances from the wall.

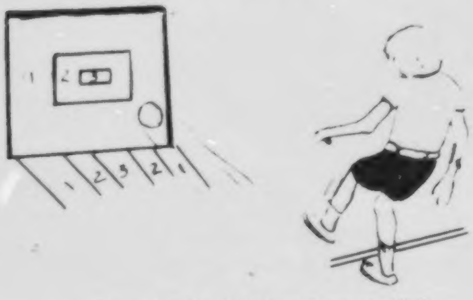


Fig. 6-73 Ball Kick to Spot on Wall

7. Name: Ball Kick at Bowling Pin

Equipment: Balls, bowling pins

Description:

- Kick ball off rubber ring at plastic or wooden bowling pin (right and left foot).

Teaching Hints:

- Always have student kick the ball in the same spot.
- Vary the distance.
- Award a point each time the student knocks the pin down.

8. Name: Ball Kick into Basket

Equipment: Playground ball, rubber ring, wastebasket.

Description:

- Kick a playground ball off a rubber ring into a wastebasket lying on its side with the opening facing the student (right and left foot).

Teaching Hints:

- Have the student vary positions – kick from in front directly into the center of wastebasket, kick from the left side, kick from the right side.
- Vary the distances.
- Emphasize proper balance and technique.

9. Name: Ball Kick Between Pins

Equipment: Playground ball, rubber ring, two bowling pins.

Description:

- Have student kick a playground ball off a rubber ring between two bowling pins that are two feet apart. The object is not to knock down the bowling pins (right and left foot).

Teaching Hints:

- Vary the distance.
- This can be played with a partner, pins set up between them with the students taking turns.
- Emphasize proper balance and technique.

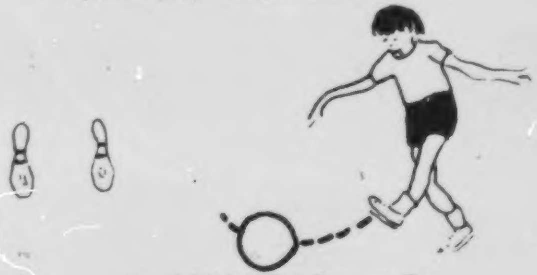


Fig. 6-74 Ball Kick Between Pins

10. Name: Kick Suspended Ball

Equipment: Large whiffleballs suspended from overhead support.

Description:

- Student kicks stationary ball with right and left foot.
- Student kicks moving ball with right and left foot.

Teaching Hints:

- Adjust height of whiffleball so that the contact is made during various leg positions.
- Permit kicking a moving ball only after the child achieves success with the stationary task.
- Increase the difficulty of contacting the moving whiffleball by releasing it in an arc.

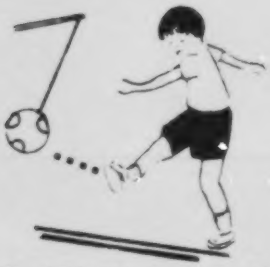


Fig. 6-75 Kick Suspended Ball

11. Name: Punt Ball into Air
    Equipment: Ball
    Description:
    - Have student punt the ball over his head and catch it when it comes down (right and left foot).

    Teaching Hints:
    - Have student hold ball waist high.
    - Stress placing the ball on the toe not dropping it down.
    - Emphasize follow-through and extension of kicking leg.
    - Emphasize control – not kicking for distance.

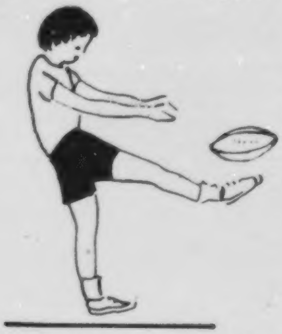


Fig. 6-76 Punt Ball Into Air

12. Name: Kick A Ball Rolled to the Student
    Equipment: Playground ball
    Description:
    - Roll a playground ball to the student and have him kick it back to you with right, then left foot.

    Teaching Hints:
    - Emphasize proper balance and technique.
    - Vary the kicking distance.
    - Stress keeping eyes on the ball until it leaves the foot.
13. Name: Kick A Rolled Ball into a Basket
    Equipment, Ball, basket
    Description:
    - Have student kick a ball that is rolled to him into a wastebasket turned on its side, with right and left foot.

    Teaching Hints:
    - Emphasize proper balance and technique.
    - Have [illegible] basket situated on left and right sides of the person rolling the ball.

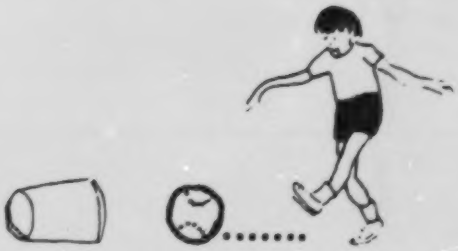


Fig. 6-77 Kick Ball Into Basket

14. Name: Run and Kick Ball into Basket
    Equipment: Ball, basket
    Description:
    Roll a ball along the ground.
    Have student run next to it.
    When the ball rolls past the basket, the student tries to kick the ball into the basket.
    Teaching Hints:
    Emphasize proper balance and technique.
    Explain that the student must wait until the ball rolls in front of the open basket.
15. Name: Kick A Bouncing Ball
    Equipment: Ball
    Description:
    Have student drop a ball and kick it as it leaves the floor (right and left foot).
    Have partner toss the ball gently so that it bounces to the kicker (right and left foot).
    Have the child perform the first two tasks with an added dimension – a target area.
    Teaching Hints:
    Emphasizes proper balance and technique.
    Stress the importance of keeping the eyes on the ball until it leaves the foot.
    Follow sequence until success is attained at each level.
16. Name: Kick A Thrown Ball at a Wall Square
    Equipment: Ball, tape or white shoe polish
    Description:
    The student kicks a thrown ball, about knee high, at a square on the wall (right and left foot).
    Teaching Hints:
    Emphasize proper balance technique.

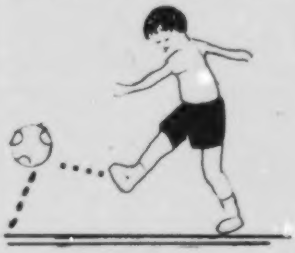


Fig. 6-78 Kick Bouncing Ball

PERCEPTUAL-MOTOR FACTORS

Visuo-Motor Activities

Visuo-motor activities are simple perceptual-motor tasks which require:

- The simultaneous integration of a visual and a motor response.
- Decision-making on the part of the learner.

1. Name: Color Stickball Hitting[1]
   Equipment: Whiffleball, broomstick (two feet long), red, yellow, and blue tape, flashcards with the words: Red, yellow, blue.
   Description: Put a stripe of red tape in the middle of the broomstick, with a yellow stripe eight inches on the other side. There are now three different color stripes on the broomstick equally separated. On one flashcard print "red," on another "yellow," and on the third "blue." The two factors involved are:
   - Motor – the student is to grasp the stick with both hands at the end and hit the thrown whiffleball back to the teacher.
   - Visual – the teacher holds up one of the flashcards as he throws the ball and the student must hit the ball with the color stripe named on the flashcard.

   Teaching Hints:
   - This is a difficult task for many children.
   - The teacher may want to use a larger ball at first, and have the student just tap the ball back.
2. Name: Arrow Following
   Equipment: White shoe polish.
   Description: A pattern of arrows are drawn on the floor with white shoe polish. Also written are the words "start" and "end."

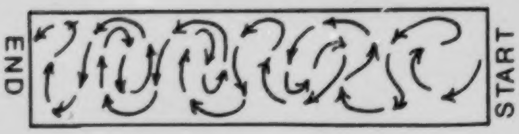


Fig. 6-79 Arrow Following

   - Student is to hop on both feet through the pattern on arrows from "start" to "end."

   The two factors involved are:
   - Motor – the student is to hop on both feet through the arrows.
   - Visual – the student must follow the pattern of the arrows.

   Teaching Hints:
   - The teacher may wish to make the hopping course more or less complicated depending upon the ability level of the student.
   - The student may hop on both feet; the teacher may want him to hop on the left or right foot also.
   - The teacher may want younger students to crawl through the arrows.

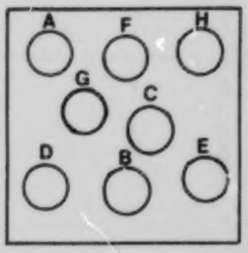


Fig. 6-80 Beanbag Letter Tossing

3. Name: Beanbag Letter Tossing
   Equipment: Beanbags, target with holes, under each hole a letter, and flashcards with letters on them.
   Description: A target, with holes and letters beneath them, is constructed from plywood or tri-wall. Flashcards with corresponding letters are made.
   - The student is to toss beanbags through the hole with the letter that matches the flashcard held by the teacher.
   - The student is to start his tossing motion and then the teacher flashes the card from behind the target.

   The two factors involved are:
   - Motor – eye and hand accuracy by tossing beanbags through holes.
   - Visual – the student must match flashcard with the lettered hole.

   Teaching Hints:
   - The teacher may want the student to spell words with the sequence of letters flashed.
   - Correct tossing motion, and follow through should be stressed by the teacher at all times.
   - Distance from the target may be increased as the student improves.
4. Name: Letter Grid Spelling
   Equipment: White shoe polish, flashcards with words on them.
   Description: A letter grid is drawn on the floor with white shoe polish.
   - The teacher or a partner holds up a flashcard, and the student is to hop to the square with the corresponding letter in it.
   - Student is to spell words in this manner.

   Two factors involved are:
   - Motor – hopping.
   - Visual – matching grid squares with flashcards.

   Teaching Hints:
   - Either letters, or whole words may be used on the flashcards dependent upon the ability level of the student.
   - Other motor skills may be incorporated such as, bouncing a ball on the correct letter.

A	G	J	N	R	T	V	Y
Q	S	U	O	B	D	P	I
E	W	X	Z	H	E	C	O
R	B	N	T	A	U	Y	E
A	E	I	O	J	G	F	S
D	P	Q	K	L	B	R	U
T	N	O	B	C	Q	L	M
J	H	S	D	A	T	E	D

Fig. 6-81 Letter Grid

5. Name: Ball and Color Catch

Equipment: Playground ball, assorted colored pieces of paper (six inch squares).

Description: The six inch squares of colored paper, with three of each color, are scattered randomly on the ground. The teacher bounces the ball to the student, and also flashes a color flashcard.

- The student is to move to the corresponding color as quickly as possible and catch the ball.

Two factors involved are:

- Motor — catching the ball.
- Visual — matching the colors.

Teaching Hints:

- The teacher must give the student some time to reach the correct color.
- This may be done with a partner.
- Different means of locomotion may be used to get to the correct color: e.g., hop on right foot, hop on left foot, etc.

6. Name: Position Copying

Equipment: None.

Description: A partner or teacher is to assume a certain position.

- Student is to copy the same position as teacher or partner.

Two factors involved are:

- Motor — gross body coordination.
- Visual — replicating the exact position.

Teaching Hints:

- The teacher may assume three positions, in sequence and the student must replicate all of them, only the second, only the first, or the first and third, etc.

7. Name: Pattern Walking

Equipment: Flashcards with numbers, letters, shapes on them.

Description: A student is shown a flashcard and he must replicate it by walking the shape, etc., on the ground.

Two factors involved are:

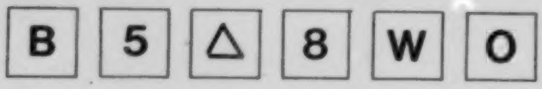


Fig. 6-82 Flashcards

- Motor — walking.
- Visual — replicating the correct shape.

Teaching Hints:

- Different means of locomotion may be used: hopping, skipping, crawling, etc.
- As the student improves, more complex pattern may be used.

8. Name: Pegboard Replication

Equipment: Pegboard, pegs, and cards with geometric shapes on them.

Description: Using the pegs, the student is to replicate the geometric shape on the card.

Two factors involved are:

- Motor — placing pegs in the holes.
- Visual — replicating and matching the correct shape.

Teaching Hints:

- The teacher may time the student, encouraging him to shorten his time on any given task.
- The shape on the card may be drawn with different colored dots and the student is to use pegs of the same colors in the proper sequence to replicate the form.

9. Name: Square and Circle Hopping

Equipment: White shoe polish.

Description: A straight line of alternate squares and circles, one foot apart, is drawn on the floor with shoe polish.

Two factors involved are:

- Motor — the student is to hop on one foot through the line of shapes.
- Visual — the student is to land on his right foot in the squares and his left foot in the circles. He must decide which foot to land on.

Teaching Hints:

- To assist the student, the teacher may at first put R's and L's in the appropriate shapes to distinguish right from left. After the student has achieved a degree of proficiency this way, the letters may be removed from the shapes so that he may decide which foot to use by looking at the shape only.
- The teacher may vary the pattern, and sequence of squares and circles, to challenge the student each day.

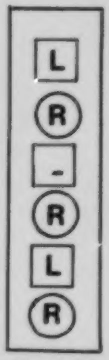


Fig. 6-83 Square and Circle Hopping

10. Name: Square Walking

Equipment: White shoe polish.

Description: A straight line of squares, one foot apart, is drawn on the floor with white shoe polish.

Two factors involved are:

- Motor — the student is to walk through the line of squares.

- Visual – the student is to walk only on the squares.

Teaching Hints:

- Have the student walk through the squares slowly at first, and then gradually increase the speed until he can walk through them rapidly.

11. Name: Ring Catching

Equipment: Rubber rings, and flashcards with the words "right," "left," "middle."

Description: The student catches the rubber rings on his hands, thrown by the teacher. As the teacher throws the rings he holds up a flashcard that reads, "right," "left," or "middle." The student must catch the rings on the appropriate hand. Both hands held flat together is the response for "middle."

Two factors involved are:

- Motor – eye and hand coordination in catching rings.
- Visual – reading and reacting to the flashcard.

Teaching Hints:

- The rings must be thrown on a horizontal plane to facilitate catching.
- As the student improves, diminish the interval between tossing the rings.

12. Name: Color Beanbag Throwing

Equipment: Different colored beanbags, and a target painted with different colors.

Description: The student tosses beanbags at the target painted with different colored circles. The color of the beanbag must match the color of the circle at which the student is throwing.

Two factors involved are:

- Motor – eye and hand accuracy in throwing.
- Visual – the student must match the colors of the beanbag with the target circle.

Teaching Hints:

- As the student develops proficiency, move him further away from the target.

13. Name: Spot Bouncing

Equipment: Basketball and white shoe polish.

Description: A pattern of spots is put down with white shoe polish.

- The student is to walk through the pattern, bouncing a basketball so that whenever it hits the ground it hits a spot.

Two factors involved are:

- Motor – bouncing.
- Visual – bouncing the ball on the spots.

Teaching Hints:

- At first the spots may be large, as the student develops proficiency, make the spots smaller.

14. Name: Spot Crawling

Equipment: White shoe polish.

Description: The student crawls through a pattern of spots as shown in Figure 6-84.

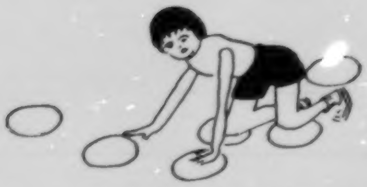


Fig. 6-84 Spot Crawling

- The student's knees and hands may land only on a spot.

Two factors involved are:

- Motor – crawling.
- Visual – hands and knees on spots.

Teaching Hints:

- Observe crawling pattern to note if bilateral movements are smooth.
- Add creativity by having one student establish the pattern and the other students replicate.

15. Name: Ball Bouncing

Equipment: Playground ball, and white shoe polish.

Description: Put two spots on the floor with white shoe polish, twenty inches apart.

- The student bounces the ball while standing about six inches behind the spots and between them.
- Student bounces the ball to the left spot with his right hand, then to the right spot with his left hand.
- Student repeats the task one hundred times.

Teaching Hints:

- Vary the task so that the child bounces with left-to-left, and right-to-right.
- Increase complexity by having the child bounce two ball simultaneously.

Audio-Motor Activities

Audio-motor activities are simple perceptual-motor tasks which requires:

- The simultaneous integration of a auditory and a motor response.
- Decision-making on the part of the learner.

1. Name: Beanbag Juggling to Sound

Equipment: Two beanbags and drum.

Description: The teacher strikes a drum either loudly or softly.

- On the loud sound the student juggles the beanbags.
- On the soft sound the student throws the beanbags up and catches them, first with one hand, then the other.

Two factors involved are:

- Motor – juggling and throwing the beanbags.
- Auditory – distinguishing loud and soft sounds, and selecting the appropriate task.

Teaching Hints:

- As the student improves, this can be made more complex by adding sounds and tasks.

- Be sure to teach the child how to juggle first.

2. Name: Pin Throwing

   Equipment: Beanbags, bowling pins, whistle, and a bell.

   Description: The student stands between two bowling pins that are twenty feet apart.

   - On the whistle, the student whirls and throws a beanbag at the pin on his left.
   - On the bell, the student throws at the pin on his right.

   Two factors involved are:

   - Motor – throwing, eye and hand accuracy.
   - Auditory – coordinating the proper sound with the left or right turn.

   Teaching Hints:

   - A ball may be rolled or kicked, to add variation to this exercise.

3. Name: Sound Sequencing

   Equipment: Drum, musical triangle, whistle, and a mat.

   Description:

   - On the sound of the drum, the student performs a forward roll.
   - On the sound of the triangle, the student performs a tripod balance.
   - On the sound of the whistle, the student performs a backward roll.
   - The teacher makes these sounds in any order and the student performs the required tasks.

   Two factors involved are:

   - Motor – forward rolls, backward rolls, and tripod balance.
   - Auditory – the student must distinguish among sounds and coordinate them with the required tasks.

   Teaching Hints:

   - At first, sound only one instrument at a time, gradually build up to four or five sounds.
   - Make sure to have a spotter for the student.
   - Teach these gymnastic moves *before* this exercise.

4. Name: Sound Locomotion

   Equipment: Whistle, bell, musical triangle, and a tamborine.

   Description: The teacher sounds each of the above instruments.

   - The student walks at the sound of the whistle.
   - The student skips at the sound of the bell.
   - The student runs at the sound of the triangle.
   - The student jumps on both feet at the sound of the tamborine.

   Two factors involved are:

   - Motor – the gross body tasks to be performed.
   - Auditory – the student must recognize the sounds, and coordinate them with the appropriate task.

   Teaching Hints:

   - To increase auditory memory the teacher should sound three or four instruments successively, the student must then perform the appropriate tasks.
   - Make sure there is ample room to perform these tasks.

5. Name: Sound Hopping

   Equipment: None

   Description: The teacher claps hands:

   - One time, and the student hops on the right foot.
   - Two quick times, and the student hops on his left foot.

   Two factors involved are:

   - Motor – the student hops on either his right or left foot.
   - Auditory – the student must distinguish between clap repetitions and decide on which foot to hop.

   Teaching Hints:

   - Stress balance and proper body position at all times.
   - Two totally different sounds may be substituted for clapping such as, a whistle and a bell.

6. Name: Drum Hopping

   Equipment: Drum

   Description: The student hops on one foot.

   - On a loud sound the student hops as high as he can.
   - On a soft sound the student changes, hopping on other foot.

   Two factors involved are:

   - Motor – hopping right and left.
   - Auditory – distinguishing sounds and selecting the appropriate task.

   Teaching Hints:

   - Increase auditory memory by making several sounds and having the student perform the proper sequence.
   - Movements may be changed to whatever the student needs work in.

7. Name: Whistle Hopping

   Equipment: Whistle

   Description: The teacher blows the whistle.

   - One blow, the student hops on his right foot.
   - Two blows, the student hops on his left foot.
   - Three blows, the student hops on both feet.

   Two factors involved are:

   - Motor – hopping and balance.
   - Auditory – distinguishing the number of whistle sounds and selecting the proper tasks.

   Teaching Hints:

   - Auditory memory may be increased by blowing three or more different combinations, and then have the student perform the appropriate tasks.

8. Name: Drum Creating

   Equipment: Drum

Description: The teacher sounds the drum, at each sound, the student switches motor tasks. The choice of tasks is left up to the student. The same task may not be repeated. Thus, the student builds a sequence of locomotor patterns.

Two factors involved are:

- Motor – the student determines the tasks.
- Auditory – the child changes tasks on sounds on the drum.

Teaching Hints:

- Get the child to perform a large variety of tasks, hopping, skipping, crawling, rolling, etc.

9. Name: Sound Marching

Equipment: Horn, bell, musical triangle, and whistle.

Description: The teacher sounds the four instruments, horn, bell, musical triangle and whistle, in any order he wishes.

- At the sound of the horn, the student walks forward.
- At the sound of the bell, the student walks backward.
- At the sound of the triangle, the student walks to the left.
- At the sound of the whistle, the student walks to the right.

Two factors involved are:

- Motor – walking, changing directions.
- Auditory – the student coordinates the proper action with the sound.

Teaching Hints:

- Try to work this up to a smooth sequence of marching and turning with no hesitation.

10. Name: Sound Kicking

Equipment: Three playground balls of different sizes, a whistle and a bell.

Description: The three balls are put on the ground six inches apart in a row. The student stands one step behind the balls. The student takes one step and swings his leg; whereupon the teacher or partner blows the whistle, rings the bell, or claps his hands.

- At the whistle, the student kicks the largest ball.
- At the bell, the student kicks the medium sized ball.
- At the clap, the student kicks the smallest ball.

Two factors involved are:

- Motor – kicking.
- Auditory – the student must coordinate the sound with the right ball to kick.

Teaching Hints:

- Timing is very important, the sound must be precisely at the same time the student's leg starts to come forward in the kicking motion.

11. Name: Ladder Traveling

Equipment: Overhead ladder and drum.

Description: The student hangs from the overhead ladder by his hands.

- At the sound of the drum the student moves to the next rung of the ladder. The student only moves on the sound of the drum.

Two factors involved are:

- Motor – ladder traveling.
- Auditory – he moves on the drum beat.

Teaching Hints:

- This activity is also a good strength builder.

12. Name: Ring Catching

Equipment: Rubber rings.

Description: The student catches, on his hands, rubber rings thrown by the teacher. As the teacher throws the rings he calls, "left," "right," or "middle." The student must catch the rings on the appropriate hand; both hands held flat together is the response for "middle."

Two factors involved are:

- Motor – eye and hand coordination in catching rings.
- Auditory – hearing and reacting to the called words.

Teaching Hints:

- The rings must be thrown so that they are horizontal to the floor to facilitate catching.
- As the student improves, throw the rings in shorter time intervals.

13. Name: Circle Bouncing

Equipment: Playground ball, white shoe polish and drum.

Description: A pattern of large circles and small circles are placed on the floor. The student bounces a ball on the circles.

- On the loud sound of the drum, the student bounces on the large circles.
- On the soft sound of the drum, the student bounces on the small circles.

Two factors involved are:

- Motor – bouncing on circles.
- Auditory – discerning loud from soft sounds, and bouncing on the appropriate circle.

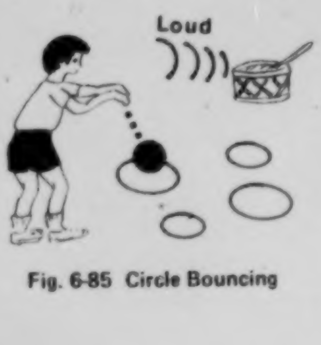


Fig. 6-85 Circle Bouncing

Complex Perceptual Motor Activities

Complex perceptual-motor activities are tasks which require:

- The simultaneous integration of two or more information systems (e.g., auditory and visual) with a motor response.
- Decision-making on the part of the learner.

1. Name: Beanbag Bowling
   Equipment: Beanbags, scoops, three plastic bowling pins marked with an "L," "R," and "M."
   Description: The student throws the beanbags from scoops at bowling pins. The teacher stands behind the student and calls, "left," "middle," or "right."
   - The student throws at the pin marked with an "L," "M," or "R."

   This task involves visual, auditory, and motor factors.
   Teaching Hints:
   - Increase the distance away from the pins as the student develops proficiency.

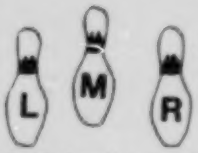


Fig. 6-86 Beanbag Bowling

2. Name: Communication Game[1]
   Equipment: Letter or number grid on the floor.
   Description: Three children are involved.
   - First child whispers a letter or number to the second.
   - Second child traces the letter or number with his finger on the third child's back.
   - Third child hops, or jumps to the designated letter or number on the grid.

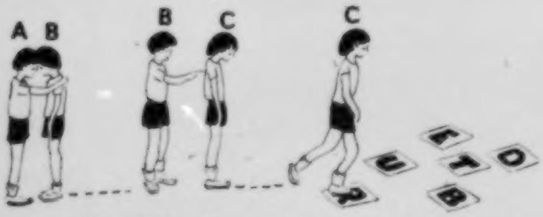


Fig. 6-87 Communication Game

   The factors involved are:
   - Auditory, tactile, visual, and motor.

   Teaching Hints:
   - This can be made more complex involving auditory memory sequencing, by using two or three letters or numbers.
   - This can be done with more or less than three children.

3. Name: Letter Tracing[2]
   Equipment: Four large rubber rugs, each with a single letter outlined in some textured material, four flashcards with the same letters on them.
   Description: Show the student the small "d" on the flashcard and say, "Remember this is a d. Trace the "d" with your finger starting at the top."
   - The student stands on the top part of the "d" on the rug.
   - The student walks following the shape of the "d" with his bare feet.
   - The student then goes to the board and erases the "d" by tracing it with his finger.

   Teaching Hints:
   - Give each direction singly, if remembering directions is a problem.
   - Wait for the student to perform each motor act.
   - Start with one letter and build up to all four.

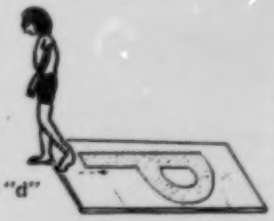


Fig. 6-88 Student Tracing "d"

4. Name: The Shape Game[3]
   Equipment: Drum, large and small geometric shapes of different colors made from plywood or cardboard.
   Description: The teacher beats the drum with either a loud or soft sound.
   - The student listens to the sound and jumps to a shape (large or small) that the sound tells him.
     The student lands on the shape and identifies its color, traces along the outline of the geometric shape, and tells the teacher what the shape is.

   Factors involved are:
   - Auditory, visual, tactile, motor and cognitive.

   Teaching Hints:
   - Stress verbalization of each response.
   - The task may be too complex for some children. Initially, the teacher may have to limit the response variables.

---

[1] Designed by Jane Harris in graduate course "Methods and Practicum Experiences for Teachers of the Handicapped," Monmouth College, N.J.

[2] Designed by Kay Guthorn in graduate course "Methods and Practicum Experiences for Teachers of the Handicapped," Monmouth College, N.J.

[3] Designed by Nancy Chase in graduate course "Methods and Practicum Experiences for Teachers of the Handicapped," Monmouth College, N.J.

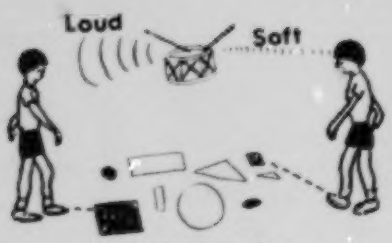


Fig. 6-89 Shape Game

5. Name: Letter Grid Game
   Equipment: Letter grid made with white shoe polish, and playground ball.
   Description: The teacher calls out a letter.
   - The student bounces a playground ball on that letter after he has hopped to it.
   - The student says the letter out loud.

   Factors involved are:
   - Visual, auditory, verbalizing, and motor.

   Teaching Hints:
   - The teacher may say words and the student is to spell them in this manner.
   - Vary the locomotor tasks required to get to the letter.
6. Name: Number Jumping
   Equipment: White shoe polish, and playground ball.
   Description: The numbers are drawn on the floor as shown in Figure 6-90. There is a student on number one and a student on number two.
   - The students pass the ball to each other as they jump in sequence from number to number, one to ten.
   - One student jumps through the numbers on the left, the other through the numbers on the right.
   - The student does not move until the other has called the proper number in sequence.

   Teaching Hints:
   - The students should perform the tasks until they can move through the numbers, jumping and passing the ball with no hesitation.

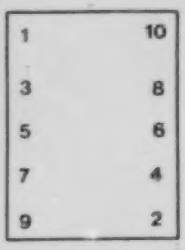


Fig. 6-90 Number Jumping

7. Name: Color Stickball Hitting
   Equipment: Playground ball, broomstick (2 feet long), bowling pin, red, blue and yellow tape.
   Description: The three tapes are put on the stick equidistant from each other.
   - The student grasps the stick at each end and taps a playground ball thrown to him so that it knocks down a bowling pin positioned six feet in front of him. As the teacher throws the ball he calls out a color; the student must hit the ball with that color of the stick.

   Teaching Hints:
   - At first, just have the student tap the ball and try to knock down the pin; then bring in the colors.

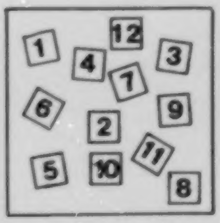


Fig. 6-91 Number Hopping

8. Name: Number Hopping
   Equipment: Stepping stones with numbers on them.
   Description: Scatter the stepping stones on the ground. Call out three or four numbers.
   - The child is to hop from number to number in the proper sequence. Increase the numbers to seven or eight as the child progresses.

   Teaching Hints:
   - The child may hop on either right, left, or both feet.
   - The child may balance an object on his head and walk through the numbers.
9. Name: Instruction Following
   Equipment: Flashcards with instructions on them and the equipment used in class.
   Description: The child is to take the flashcard, read the instructions out loud to his partner which the partner is to perform. The card may read "Walk backwards across the balance beam with a beanbag on your head." Directions on the cards are to be made up by the teacher and should focus on the goals of that particular lesson.
   Teaching Hints:
   - This type of activity is a maturity builder and should be used as a motivational device.
10. Name: Circle Walking
    Equipment: Playground ball, drum, white shoe polish, and two flashcards that read "right," and "left."
    Description: The student walks through a pattern of circles put on the ground with white shoe polish. The teacher beats the drum:
    - Loud sound, the student walks in the large circles.
    - Soft sound, the student walks in the small circles.
    - At the same time the student bounces a playground ball with either his right or left hand depending upon which flashcard the teacher shows him.

Teaching Hints:
- The student may hop or jump through the pattern.

11. Name: Pin Kicking
Equipment: Three bowling pins, drum, playground ball, bell, and a whistle.
Description: A ball is placed on the ground with a bowling pin ten feet to the left of it, another pin ten feet to the right, and another pin ten feet in front.
    - At the sound of the bell, the student kicks at the pin on the left.
    - At the sound of the whistle, the student kicks at the pin on the right.
    - At the sound of the drum, the student kicks at the pin in front of him.

These sounds are not to be made until the student starts to bring his leg forward to kick the ball.
Teaching Hints:
- This technique takes correct timing on the part of the teacher.

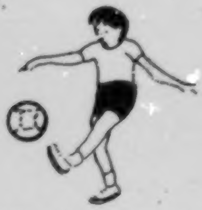


Fig. 6-92 Pin Kicking

12. Name: Paper Picking
Equipment: Pieces of different colored paper, and a drum.
Description: The student hops on the left foot on loud sounds of the drum, on the right foot on soft sounds of the drum.
    - The student bends over and picks up a piece of paper as he hops.
    - The color is determined by the teacher who calls it out as he beats on the drum.

Three factors involved are:
- Motor – hopping and bending
- Auditory – integrating loud and soft sounds with right and left foot hopping.
- Visual – picking up the appropriate colored paper.

Teaching Hints:
- The color called and the drum beat should be simultaneous.

13. Name: Balloon Tapping
Equipment: Different colored balloons, and balance board.
Description: The student stands on a balance board. Four different color balloons are thrown into the air over his head. The instructor calls out a color of one of the balloons.
    - The student is to tap that color balloon in the air and keep on tapping it so that it does not hit the ground.

Three factors involved are:
- Motor – balancing and tapping the balloon.
- Auditory – hearing and deciding which color balloon to tap.
- Visual – tapping the right colored balloon.

Teaching Hints:
- Try this with the student on the ground, then move him to the balance board.
- Three or four other students may each hold and throw a balloon.

14. Name: Color Spot Bouncing
Equipment: Playground ball, different colored chalk, five or six colors
Description: A pattern of different colored spots is put down with chalk.
    - The student bounces a playground ball on the spots.
    - The student must bounce the ball on the spot whose color the instructor, or a partner, calls out.

Three factors involved are:
- Motor – bouncing the ball.
- Auditory – hearing and knowing which color to bounce on.
- Visual – matching what he hears with what he sees.

Teaching Hints:
- Use a ball that the student can control; it may be necessary to deflate the ball somewhat.

15. Name: Beanbag Bowling
Equipment: Beanbags, flashcards, rubber ring and balance beam
Description: The student stands on the balance beam with a ring on his head and juggles two beanbags. When the teacher claps his hands, the student stops juggling, looks at a flashcard which tells him "right," or "left," and responds by throwing a beanbag with his right or left hand at the appropriate bowling pin. This involves several factors; auditory, visual and motor tasks.
Teaching Hints:
- This is an advanced task, work up to it by teaching each component separately and then putting them all together.

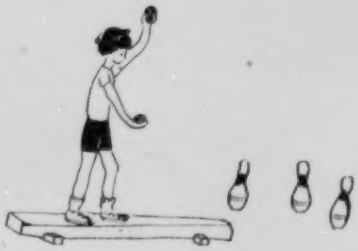


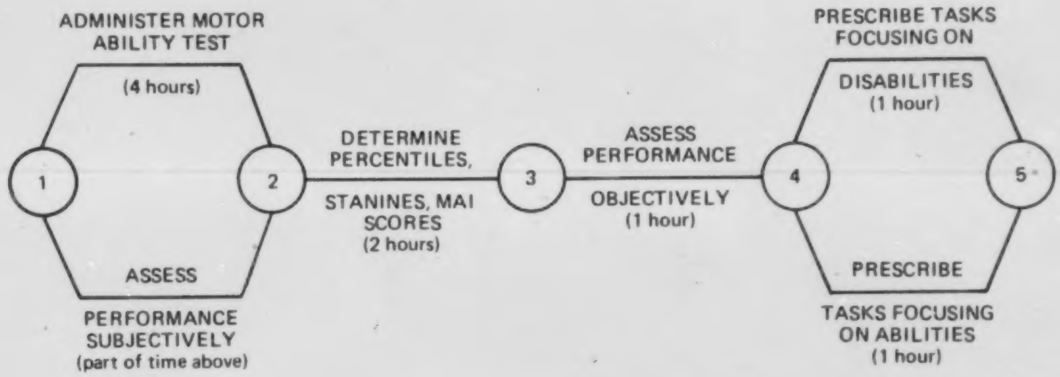
Fig. 6-93 Beanbag Bowling

APPENDICES

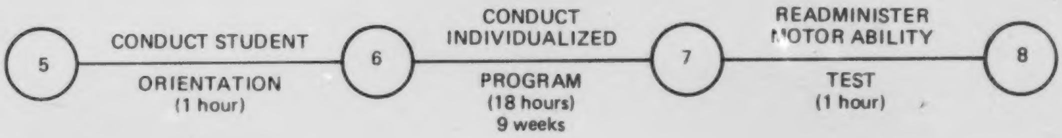
APPENDIX A

MOTOR ABILITY FLOW CHART

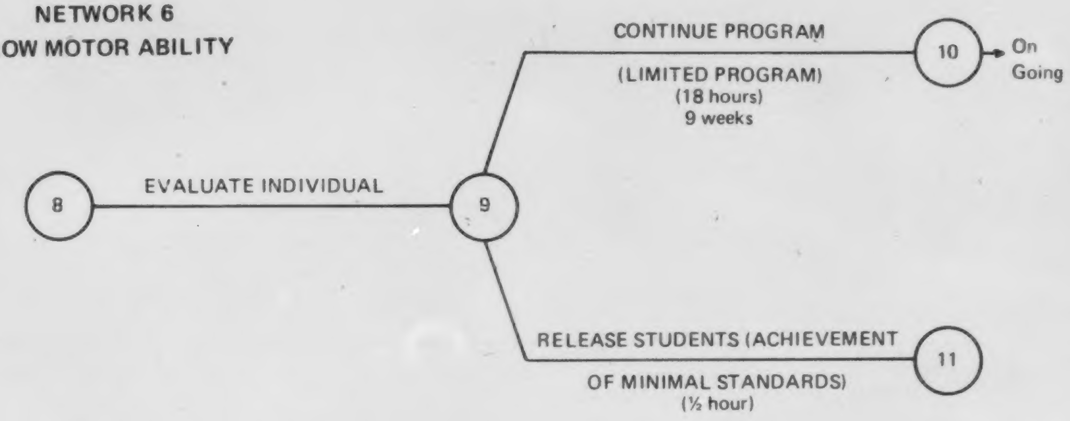
NETWORK 4
LOW MOTOR ABILITY


ADMINISTER MOTOR ABILITY TEST
(4 hours)
ASSESS
PERFORMANCE SUBJECTIVELY
(part of time above)
1
2
DETERMINE PERCENTILES,
STANINES, MAI SCORES
(2 hours)
3
ASSESS PERFORMANCE
OBJECTIVELY
(1 hour)
4
5
PRESCRIBE TASKS FOCUSING ON
DISABILITIES
(1 hour)
PRESCRIBE
TASKS FOCUSING ON ABILITIES
(1 hour)

NETWORK 5
LOW MOTOR ABILITY


5
CONDUCT STUDENT
ORIENTATION
(1 hour)
6
CONDUCT INDIVIDUALIZED
PROGRAM
(18 hours)
9 weeks
7
READMINISTER MOTOR ABILITY
TEST
(1 hour)
8

NETWORK 6
LOW MOTOR ABILITY


8
EVALUATE INDIVIDUAL
9
CONTINUE PROGRAM
(LIMITED PROGRAM)
(18 hours)
9 weeks
10
On Going
RELEASE STUDENTS (ACHIEVEMENT
OF MINIMAL STANDARDS)
(½ hour)
11

APPENDIX A (Continued)

MOTOR ABILITY ACTIVITY CHECKLIST

EVENT NUMBERS		ACTIVITY TIME	ACTIVITY DESCRIPTION	NETWORK NUMBERS	EXPLANATION
BEGINNING	ENDING				
1	11		**IMPLEMENT PROGRAM FOR STUDENTS WITH LOW MOTOR ABILITY**	4-6	
1		4 hours	Administer Motor Ability Test .Explain and demonstrate test items .Administer test items on a group basis (those that are feasible) .Administer more difficult items on a one-to-one basis (after starting a group activity), or use teacher aides, paraprofessionals, and students to assist with the testing .Record raw scores .Post test directions	4	Township of Ocean Motor Ability Test will be administered to all students in grades K-2, plus those with severe learning disabilities or mental retardation
1	2	part of time above	Assess Performance Subjectively · Identify areas of deficiency · Record anecdotal remarks as to "how" the student performs	4	Teacher will observe and note motor pattern problems

APPENDIX A (Continued)

MOTOR ABILITY ACTIVITY CHECKLIST

EVENT NUMBERS		ACTIVITY TIME	ACTIVITY DESCRIPTION	NETWORK NUMBERS	EXPLANATION
BEGINNING	ENDING				
2	3	2 hours	Determine Percentiles, Stanines, PFI Scores ·Explain and demonstrate computation procedures to aides ·Record norm scores ·Post percentile and stanine norms	4	Teacher will determine test scores; the aide(s) can determine norm scores
3	4	1 hour	Assess Performance Objectively ·Identify students with MAI scores of 35 and below, or a single index score of 20 ·Prepare a list of students with deviant scores for D&A referral	4	Teacher will assess student performance
4	5	1 hour	Prescribe Tasks Focusing on Disabilities ·Develop a series of tasks to strengthen the specific deficiencies (i.e., gross body coordination, gross body balance, eye-hand coordination, eye-hand accuracy, eye-foot accuracy)	4	Teacher will prescribe tasks to improve motor performance

APPENDIX A (Continued)

MOTOR ABILITY ACTIVITY CHECKLIST

EVENT NUMBERS		ACTIVITY TIME	ACTIVITY DESCRIPTION	NETWORK NUMBERS	EXPLANATION
BEGINNING	ENDING				
4	5	1 hour	Prescribe Tasks Focusing on Abilities ·Discuss activity interests with children ·Explain and demonstrate new games ·Prescribe games such as "Follow the Leader" so that children are given a choice.	4	Tasks will be prescribed on the basis of pupil interest
5	6	1 hour	Conduct Student Orientation ·Explain class procedures, care and replacement of supplies and equipment, and safety rules ·Prepare all necessary forms	5	Program values, daily class procedures will be discussed; all necessary forms will be prepared
6	7	18 hours (9 weeks)	Conduct Individualized Program ·Set-up individualized stations in the class ·Familiarize each child with his prescribed tasks and stations	5	Individualized program focusing on specific disabilities and abilities will be conducted two or three times each week (in addition to the unrestricted program)

APPENDIX A (Continued)

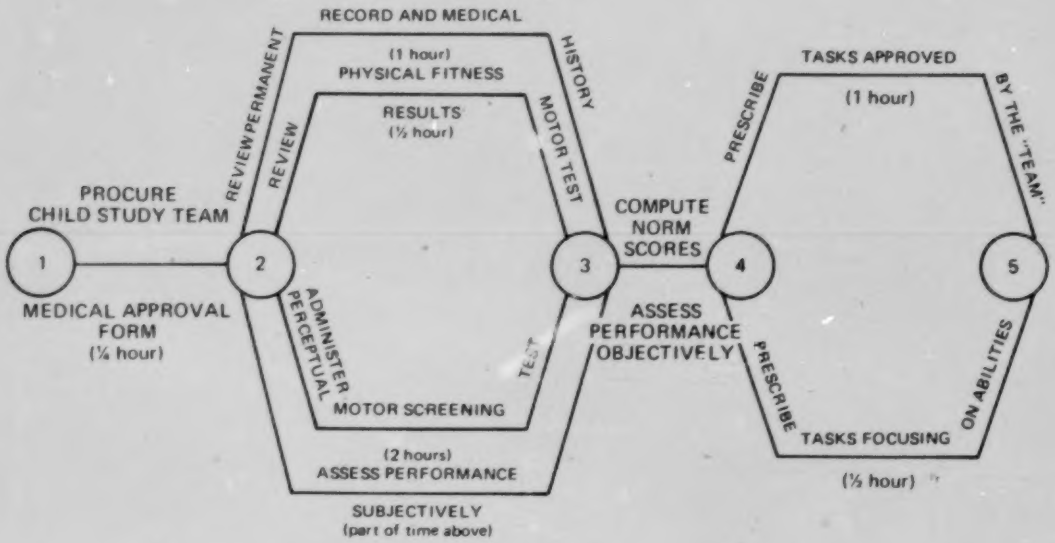
MOTOR ABILITY ACTIVITY CHECKLIST

EVENT NUMBERS		ACTIVITY TIME	ACTIVITY DESCRIPTION	NETWORK NUMBERS	EXPLANATION
BEGINNING	ENDING				
			.Establish daily class procedures .Record dates and accomplishments on Individual Prescription Cards		
7	8	1 hour	Readminister the Motor Ability Test .Recompute percentiles, stanines and MAI scores	5	Students will be retested to determine progress
8	9	½ hour	Evaluate Individual Progress .Determine student progress on each test item and on the test battery (in terms of improvement as well as achievement)	6	Post-test results will be analyzed
9	10	18 hours (9 weeks)	Continue Program, Limited Improvement .Vary motor tasks to stimulate progress .Contact parents to urge home practice	6	Students evidencing limited progress will be scheduled for another nine-week period
9	11	½ hour	Release Students, Achievement of Minimal Standards .Release students who attain an MAI score of 50 or above, with no single index score of less than 40	6	Self-explanatory

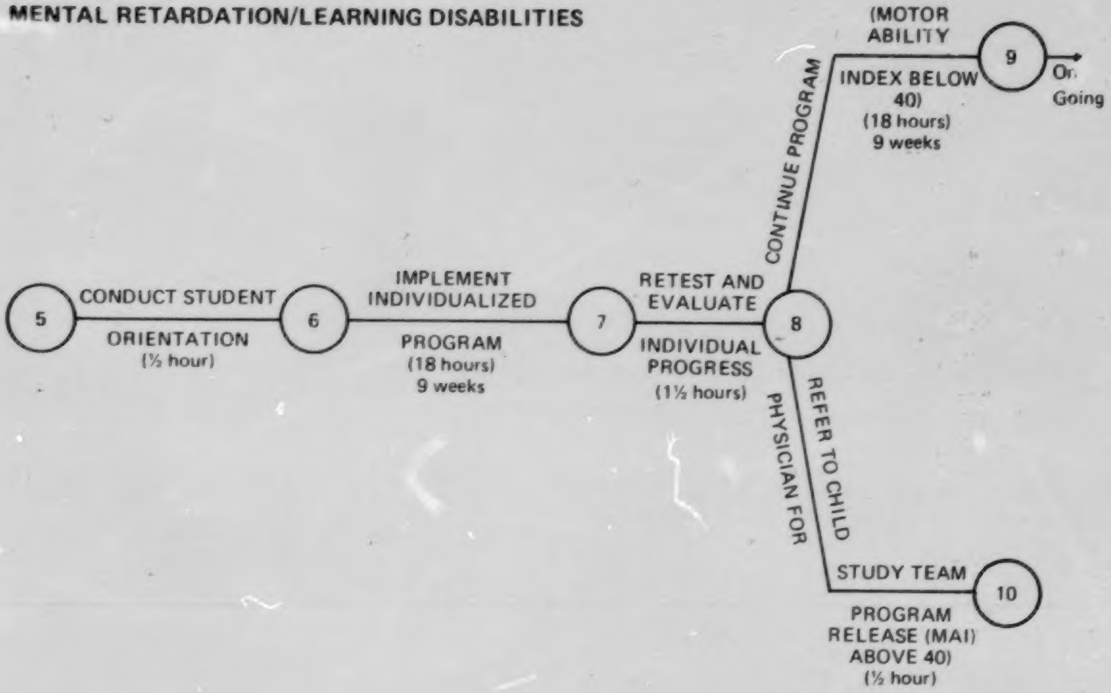
APPENDIX A (Continued)

PERCEPTUAL-MOTOR FLOW CHART

NETWORK 13
MENTAL RETARDATION/LEARNING DISABILITIES


1
PROCURE
CHILD STUDY TEAM
MEDICAL APPROVAL
FORM
(¼ hour)
2
REVIEW PERMANENT
RECORD AND MEDICAL
HISTORY
(1 hour)
REVIEW
PHYSICAL FITNESS
RESULTS
(½ hour)
MOTOR TEST
ADMINISTER
PERCEPTUAL
MOTOR SCREENING
TEST
(2 hours)
ASSESS PERFORMANCE
SUBJECTIVELY
(part of time above)
3
COMPUTE
NORM
SCORES
ASSESS
PERFORMANCE
OBJECTIVELY
4
PRESCRIBE
TASKS APPROVED
BY THE "TEAM"
(1 hour)
PRESCRIBE
TASKS FOCUSING
ON ABILITIES
(½ hour)
5

NETWORK 14
MENTAL RETARDATION/LEARNING DISABILITIES


5
CONDUCT STUDENT
ORIENTATION
(½ hour)
6
IMPLEMENT
INDIVIDUALIZED
PROGRAM
(18 hours)
9 weeks
7
RETEST AND
EVALUATE
INDIVIDUAL
PROGRESS
(1½ hours)
8
CONTINUE PROGRAM
(MOTOR
ABILITY
INDEX BELOW
40)
(18 hours)
9 weeks
9
On
Going
REFER TO CHILD
STUDY TEAM
PHYSICIAN FOR
PROGRAM
RELEASE (MAI)
ABOVE 40)
(½ hour)
10

APPENDIX A (Continued)

PERCEPTUAL-MOTOR ACTIVITY CHECKLIST

EVENT NUMBERS		ACTIVITY TIME	ACTIVITY DESCRIPTION	NETWORK NUMBERS	EXPLANATION
BEGINNING	ENDING				
1	10		**IMPLEMENT PROGRAM FOR CHILDREN WITH MENTAL RETARDATION OR LEARNING DISABILITIES**	13-14	Children with mental retardation or learning disabilities, who are referred by the Child Study Team and medical inspector, will be provided physical activity programs commensurate with their needs
1	2	¼ hour	Procure Child Study Team And Medical Approval Form · Obtain proper form, with prescriptive tasks	13	Self-explanatory
2	3	1 hour	Review Permanent Record And Medical History · Discuss each child with the special educator, learning disability specialist, and school nurse	13	Review of the records and medical history will provide adjunctive prescriptive information

APPENDIX A (Continued)

PERCEPTUAL-MOTOR ACTIVITY CHECKLIST

EVENT NUMBERS		ACTIVITY TIME	ACTIVITY DESCRIPTION	NETWORK NUMBERS	EXPLANATION
BEGINNING	ENDING				
2	3	½ hour	Review Physical Fitness and Motor Ability Test Results · Record Physical fitness and motor deficiencies	13	Self-explanatory
2	3	2 hours	Administer Perceptual-Motor Screening Tests · Test to ascertain whether problems are perceptual response, or integrative motor response · Test to ascertain whether perceptual response problems are auditory, visual, etc.	13	The screening tests will provide insight as to the types of physical activities that are to be prescribed
2	3	part of time above	Assess Performance Subjectively · Record anecdotal remarks on prescription card	13	Performance will be assessed to note "process" problems
3	4	1 hour	Compute Norm Scores And Assess Performance Objectively · Record all objective scores on prescription card · Convert raw scores to norm scores	13	Raw scores, norm scores and criterion-referenced norm scores will be recorded
4	5	1 hour	Prescribe Tasks Approved by the	13	Child Study Team will submit recom-

APPENDIX A (Continued)

MOTOR ABILITY ACTIVITY CHECKLIST

EVENT NUMBERS		ACTIVITY TIME	ACTIVITY DESCRIPTION	NETWORK NUMBERS	EXPLANATION
BEGINNING	ENDING				
			"Team" · Design tasks to increase "attention span," improve perceptual-motor ability and to enhance cognition and academic achievement (half the period)		mended tasks with their participation approval form
4	5	½ hour	Prescribe Tasks Focusing on Abilities · Design games where each child is afforded the opportunity to be the "leader" · Permit the students to go to the activity station of their choice (half the period)	13	Tasks that focus on abilities will be included to enhance the child's self-concept
5	6	½ hour	Conduct Student Orientation · Explain class procedures, care and replacement of supplies and equipment and safety rules · Prepare all necessary forms	14	Daily class procedures will be discussed
6	7	18 hours (9 weeks)	Implement Individualized Program · Set up a teaching station for each "factor" such as eye-hand coordination · Start entire class on a "set" rou-	14	Each child's program will be designed commensurate with his needs

APPENDIX A (Continued)

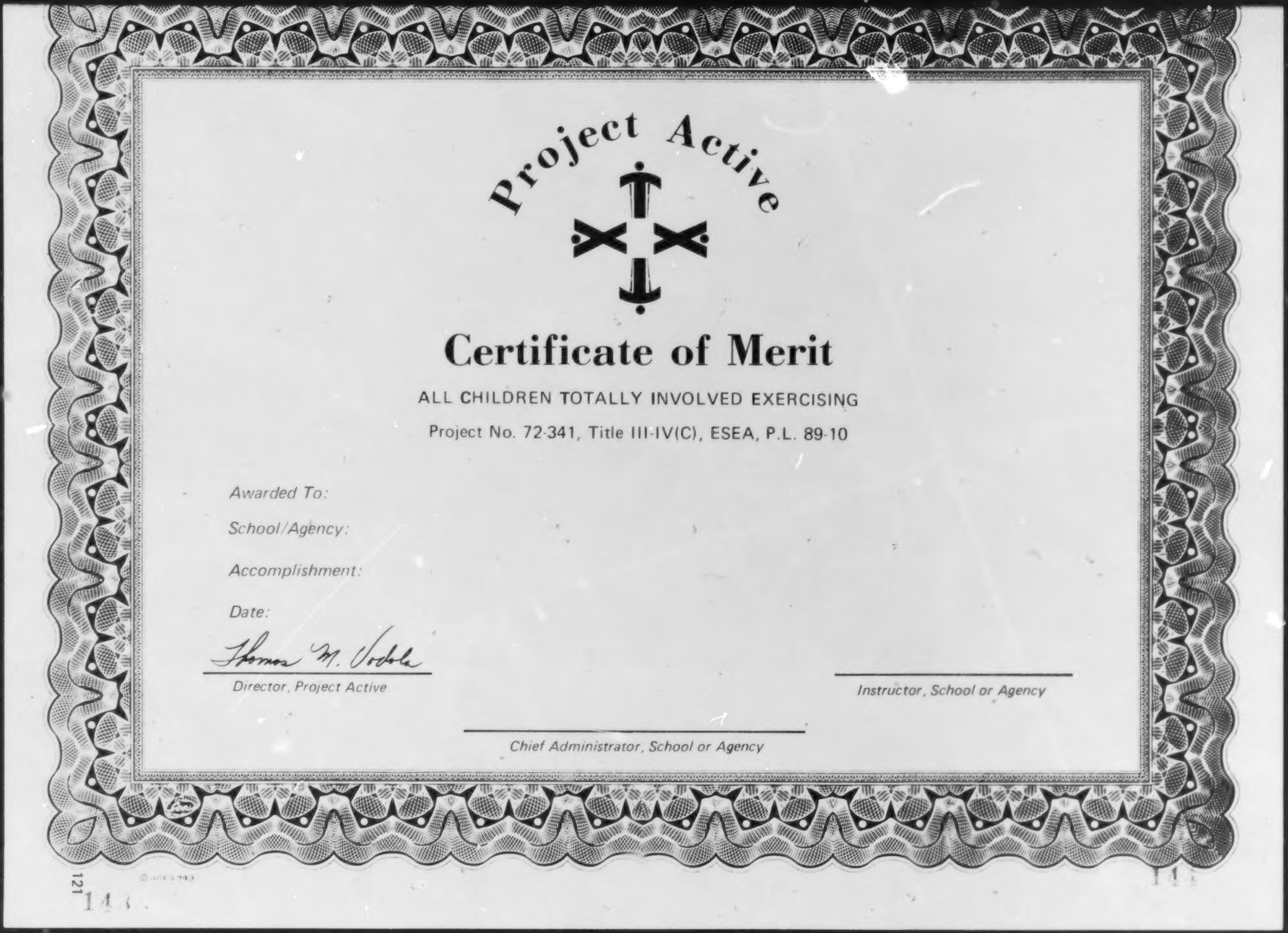
MOTOR ABILITY ACTIVITY CHECKLIST

EVENT NUMBERS		ACTIVITY TIME	ACTIVITY DESCRIPTION	NETWORK NUMBERS	EXPLANATION
BEGINNING	ENDING				
			tine and then take one child at a time through his "specific" routine . Assign some students as partners so that as one performs, the other provides feedback . Design group activities for the second half of the period to enhance socialization		
7	8	1½ hours	Retest and Evaluate Individual Progress . Retest, compare pre- and post-test scores . Analyze data in terms of achievement as well as improvement	14	Progress will be evaluated every nine weeks
8	9	18 hours (9 weeks)	Continue Program: Motor Ability Index Below 40 . Encourage parents to work with their child on his prescription at home . Revise prescription if motivation is lacking . Discuss possible task modifications with the "team"	14	Self-explanatory

APPENDIX A (Continued)

PERCEPTUAL-MOTOR ACTIVITY CHECKLIST

EVENT NUMBERS		ACTIVITY TIME	ACTIVITY DESCRIPTION	NETWORK NUMBERS	EXPLANATION
BEGINNING	ENDING				
8	10	½ hour	Refer to Child Study Team or Physician For Program Release: MAI Above 40 •"Team" to approve release, or return to program **Note:** Student may be retained in the program, regardless of MAI score, if the teacher feels he needs additional work in perceptual-motor tasks	14	Self-explanatory



Project Active

Certificate of Merit

ALL CHILDREN TOTALLY INVOLVED EXERCISING

Project No. 72-341, Title III-IV(C), ESEA, P.L. 89-10

Awarded To:

School/Agency:

Accomplishment:

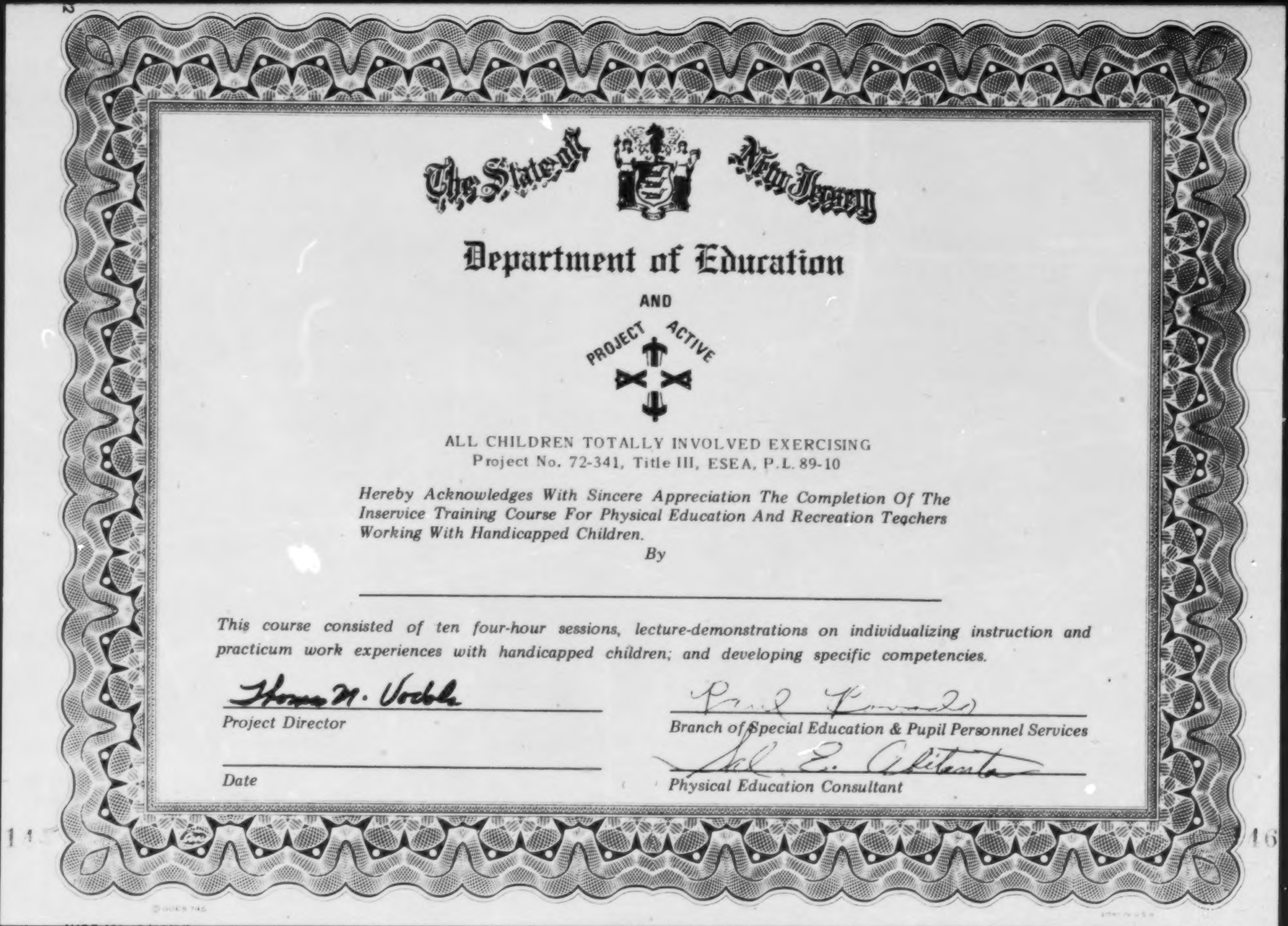
Date:

Thomas M. Vodola

Director, Project Active

Instructor, School or Agency

Chief Administrator, School or Agency



The State of New Jersey

Department of Education

AND

PROJECT ACTIVE

ALL CHILDREN TOTALLY INVOLVED EXERCISING
Project No. 72-341, Title III, ESEA, P.L. 89-10

Hereby Acknowledges With Sincere Appreciation The Completion Of The Inservice Training Course For Physical Education And Recreation Teachers Working With Handicapped Children.

By

____

This course consisted of ten four-hour sessions, lecture-demonstrations on individualizing instruction and practicum work experiences with handicapped children; and developing specific competencies.

Thomas M. Vodola
Project Director

Branch of Special Education & Pupil Personnel Services

____
Date

Sal E. Abitanta
Physical Education Consultant

APPENDIX D

SUPPLY AND EQUIPMENT NEEDS FOR PROGRAM IMPLEMENTATION

To: Adopting School Districts/Agencies
From: Dr. Thomas M. Vodola, Director, Project ACTIVE
Re: Supply/Equipment Needs for Program Implementation

The appended tables provide specific information relative to supply and equipment needs for program installation. The format has been designed to facilitate the identification of items for those who are adopting or adapting one phase of the program, or the total program. The information supplied includes:

- The specific item
- Essential items needed (coded with an "N")
- The number of items needed
- Items recommended (coded with an "R")
- The unit price of each item
- The source of the item

The tables reflect the basic needs for implementing the program in one school. It is recommended that one set be purchased for each additional school involved. (If a district has some of the items on hand, it obviates the need for that expenditure.)

APPENDIX D (Continued)

PROJECT ACTIVE SUPPLY/EQUIPMENT NEEDS[1]

COMPONENT ADOPTED ITEMS	TOTAL PROGRAM				Items Needed	LOW MOTOR ABILITY		LOW PHYSICAL VITALITY		NUTRITIONAL DEFICIENCIES		BREATHING PROBLEMS		POSTURAL ABNORMALITY		MOTOR DISABILITIES		COMMUNICATION DISORDERS	
	N	R	Cost	Source		N	R	N	R	N	R	N	R	N	R	N	R	N	R
PC5026 Shoulder Breadth, Length Caliper	X		74.90	J.A. Preston Corp. 71 Fifth Avenue N.Y., N.Y. 10003	1					X									
PC5028 Large Skinfold (Fat Caliper)	X		142.45	J.A. Preston	1					X									
PC5155 Dry Spirometer	X		176.85	J.A. Preston	1							X							
PC5156 Disposable Paper Mouthpieces	X		31.60	J.A. Preston	500							X							
PC5059 Flexometer		X	246.65	J.A. Preston	1														
or PC5054 Plastic Goniometer (Transparent)	X		20.20	J.A. Preston	1											X			
PC5022A Symmetrigraf (Posture Grid)	X		80.60	J.A. Preston	1									X					
No. 305 Stall Bars, Starter Unit (optional)		X		Nissen Corp. 930 27th Ave. Cedar Rapids, Iowa	1										X				
No. 39 Wall Mounted Horizontal Ladder (optional)		X		Nissen Corp.	1										X				
or Construct Horizontal Ladder (optional)		X		Maintenance Dept.	1										X				X
No. 92602 Utility Playground Ball, PG8½	X		3.00	J.L. Hammett Co. 2393 Vaux Hall Rd. Union, N.J. 07083	12	X										X			
No. 92655 Fun Balls (Plastic) S-650	X		.55	J.L. Hammett Co.	12	X										X			

---

[1] Contact source for unlisted prices.

APPENDIX D (Continued)

PROJECT ACTIVE SUPPLY/EQUIPMENT NEEDS

COMPONENT ADOPTED ITEMS	TOTAL PROGRAM				Items Needed	LOW MOTOR ABILITY		LOW PHYSICAL VITALITY		NUTRITIONAL DEFICIENCIES		BREATHING PROBLEMS		POSTURAL ABNORMALITY		MOTOR DISABILITIES		COMMUNICATION DISORDERS	
	N	R	Cost	Source		N	R	N	R	N	R	N	R	N	R	N	R	N	R
No. 92670 Saf-T Bat (Plastic) No. 705	X		2.25	J.L. Hammett Co.	3	X										X			
Plastic Measuring Tape 36"	X			Local Fabric Shop				X		X				X					
White Shoe Polish, Bottle	X		.55	Local Supermarket	3	X		X						X		X			
No. 39170 Water Color Marking Pen, Black	X		.40	J.L. Hammett	1									X					
No. 61145 Pegboard and Pegs, No. 7615 (optional)		X	3.45	J.L. Hammett	6 sets		X										X		
PEC1064 Walk-On Letters	X		29.85	J.A. Preston	1 set	X													
No. 9201 Audible Ball Electronic	X			Royal Nat'l. Inst. for the Blind, 224-6-8 Great Portland St. London, W-1, England	1													X	
No. 92663 Audi-Ball, No. AB-30 (optional)		X		J.L. Hammett	1													X	
No. 1-0357 Staley Sports Field Kit (optional)				American Printing House for the Blind 1839 Frankfort Ave. P.O. Box 6085 Louisville, Kentucky 40206	1														
No. 1-0304 Portable Audible Goal Locator		X		American Printing House for the Blind	1													X	
Barbells		X		J.L. Hammett	1				X		X				X		X		

APPENDIX D (Continued)

PROJECT ACTIVE SUPPLY/EQUIPMENT NEEDS

COMPONENT ADOPTED ITEMS	TOTAL PROGRAM				Items Needed	LOW MOTOR ABILITY		LOW PHYSICAL VITALITY		NUTRITIONAL DEFICIENCIES		BREATHING PROBLEMS		POSTURAL ABNORMALITY		MOTOR DISABILITIES		COMMUNICATION DISORDERS	
	N	R	Cost	Source		N	R	N	R	N	R	N	R	N	R	N	R	N	R
Stopwatch	X			J.L. Hammett	1	X		X		X		X							
PEC2747A Beanbag Game		X	50.45	J.A. Preston	2												X		
PEC274/B Beanbag Set		X	32.40	J.A. Preston	1												X		
Chinning Bar	X			Nissen Corp.	2			X							X		X		X
Mats, 5′ x 10′	X			Nissen Corp.	3	X		X				X		X		X		X	
No. 92882 Number 3 Fleece Balls	X		1.50	J.L. Hammett	3	X										X		X	
No. 92645 Number CT850 Endure Tetherball	X		10.90	J.L. Hammett	1	X										X			
PEC4806 Walk-On Number Kit	X		17.85	J.A. Preston	1 set	X													
No. 92656 Number S-630 Fun Balls	X		.40	J.L. Hammett	12	X										X			
No. 84252 Rubber Quoit Set	X		5.65	J.L. Hammett	1 set	X													
No. 60676 Footsteps to Numbers, 6076	X		8.00	J.L. Hammett	1 set	X													
No. 92730 Jump Rope (7′)	X		1.30	J.L. Hammett	6			X		X		X							
Shape O Ball		X		Tupperware Products	1	X													X
PEC2600 Doorway Chinning Bar		X	14.95	J.A. Preston	1				X									X	
PEC2766A Deluxe Safe-T-Play Batting Set		X	56.90	J.A. Preston	1		X											X	
PEC2771B Pitch Back		X		J.A. Preston	1		X												
Masking Tape		X		Local Store	6 roll		X											X	

APPENDIX D (Continued)

PROJECT ACTIVE SUPPLY/EQUIPMENT NEEDS

COMPONENT ADOPTED ITEMS	TOTAL PROGRAM				Items Needed	LOW MOTOR ABILITY		LOW PHYSICAL VITALITY		NUTRITIONAL DEFICIENCIES		BREATHING PROBLEMS		POSTURAL ABNORMALITY		MOTOR DISABILITIES		COMMUNICATION DISORDERS	
	N	R	Cost	Source		N	R	N	R	N	R	N	R	N	R	N	R	N	R
LP6050 Coordination Skills		X	12.95	Kimbo Educational P.O. Box 246 Deal, N.J. 07723	1		X												
EA606-7 Developing Perceptual Motor Needs		X	12.95	Kimbo Educational	1		X												
EA605 Developing Body Awareness		X	6.50	Kimbo Educational	1		X										X		X
EA655 Relaxation		X	6.50	Kimbo Educational	1		X						X		X		X		X
EA657 Dynamic Balance		X	12.95	Kimbo Educational	1		X												X
EA658 Balance Beam Activity		X	12.95	Kimbo Educational	1		X												
EA656 Pre Tumbling Skills		X	12.95	Kimbo Educational	1		X												X
LP5000 Developing Body Space Perception Motor Skills CM1056, 1058, 1079		X	15.75	Kimbo Educational	1		X										X		X
LP5000 Teaching Children Mathematics through Games		X	12.95	Kimbo Educational	1		X												
LP8060 To Move Is To Be		X	12.95	Kimbo Educational	1		X												
LP4000 Rhythmic Rope Jumping		X	10.95	Kimbo Educational	1		X		X		X		X						X
4032-34 Developing Exercises		X		Dance Records, Inc. Waldwick, N.J. 07463	1				X				X						
4008 Elementary School Exercises to Music		X		Dance Records, Inc.	1		X		X				X						X
Foot Disinfectant	X			Local Drug Store	1 Gal.									X				X	

APPENDIX E

BASIC MOTOR ABILITY TEST: COMPOSITE SCORE SHEET

School: ____________ City/State: ____________ Teacher: ____________ Date: ____________

Subject No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Somatotype																
Sex																
M.A.																
I.Q.																
Age																
Handicap																
Test Item																
1. Walk																
2. Creep																
3. Climb stairs																
4. Skip																
5. March-in-Place																
Stanine, CBC																
1. Stand-Both Feet																
2. Stand-Right Foot																
3. Stand-Left Foot																
4. Jump-Feet Staggered																
5. Jump-Feet Parallel																
6. Jump-Stationary																
7. Hop-Right Foot																
8. Hop-Left Foot																
Stanine, B/PO																
1. Catch																
2. Ball-Bounce																
3. Touch Ball-Lateral																
4. Touch Ball-Fore/Aft																
5. Bat Ball-Hand																
6. Bat Ball-Bat																
Stanine, EHC																
1. Throw-Right																
2. Throw-Left																
3. Kick-Right																
4. Kick-Left																
Stanine EHA/EFA																
TOTAL STANINE																
MOTOR ABILITY INDEX																

APPENDIX F

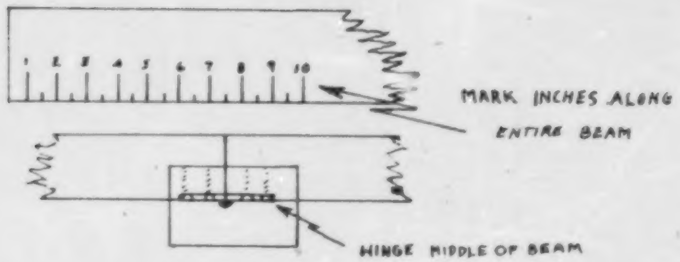
BASIC MOVEMENT PERFORMANCE PROFILE COMPOSITE SCORE SHEET

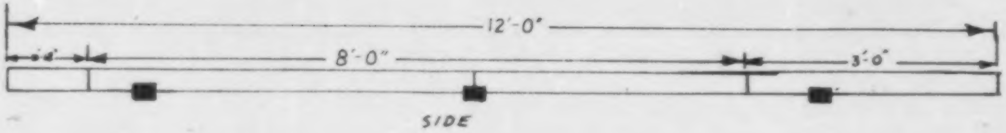
School:________________ Teacher:________________ Date:________________

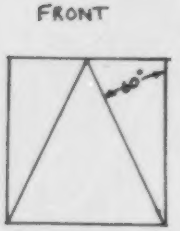
Somatotype													
Sex													
M.A.													
I.Q.													
Age													
Handicap													
Total													
20. Hang													
19. Kick													
18. Catch													
17. Throw													
16. Pull													
15. Push													
14. Hit Ball													
13. Carry Chair													
12. Balance Beam													
11. Balance One Foot													
10. Forward Roll													
9. Dodge													
8. Jump Down													
7. Broad Jump													
6. Climb													
5. Run													
4. Down Stairs													
3. Up Stairs													
2. Walk													
1. Crawl													
Subject No.	1	2	3	4	5	6	7	8	9	10	11	12	13

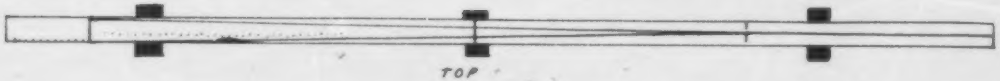
APPENDIX G

TAPERED BALANCE BEAM


1
2
3
4
5
6
7
8
9
10
MARK INCHES ALONG ENTIRE BEAM
HINGE MIDDLE OF BEAM

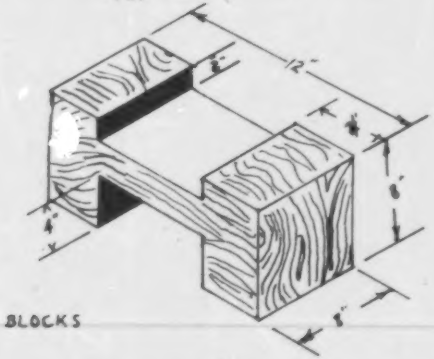

12'-0"
1'-0"
8'-0"
3'-0"
SIDE





SCALE ½" = 1'-0"

SCALE 1" = 0'-4"



3 - BLOCKS

APPENDIX H

MOTOR ABILITY TEST, Ages 8-11: COMPOSITE SCORE SHEET

School: ____________________ City/State: ____________________________ Teacher: __________________________ Date: _________________________

Subject No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Somatotype																										
Sex																										
M.A.																										
I.Q.																										
Age																										
Handicap																										
Test Item																										
1. Cable Jump																										
Stanine, GBC																										
2. Walk, Beam																										
Stanine, BPO																										
3. Ball-Bouncing																										
Stanine, EHC																										
4. Throw, Target																										
Stanine, EHA																										
5. Kick, Target																										
Stanine, EFA																										
Total Stanine																										
Motor Ability Index																										

APPENDIX I

STATE OF NEW JERSEY: MOTOR ABILITY NORMS[1]

AGE 4

GROSS BODY COORD.		BALANCE-POST. ORIENT.		EYE-HAND COORD.		EYE-HAND ACCURACY		EYE-FOOT ACCURACY		MOTOR ABILITY INDEX		%	STANINE
N=76		51		49		48		67		61			
M	F	M	F	M	F	M	F	M	F	M	F		
10		24		18		14		13		86		99	9
10		23		17		13		9		86		96	8
10		21		16		11		9		84		90	8
10		16		13		10		7		80		80	7
10		15		12		10		6		80		75	6
10		15		10		10		6		78		70	6
9		13		9		9		6		78		65	6
9		13		8		9		6		76		60	5
8		12		4		7		5		74		50	5
8		11		3		5		5		62		40	5
8		11		3		5		5		62		35	5
8		10		2		5		5		58		30	4
8		9		2		4		4		54		25	4
7		8		1		3		4		54		20	4
6		6		0		1		3		44		10	3
4		5		0		0		2		38		4	2
3		1		0		0		1		36		1	1

AGE 5

N=417	304	406	287	396	297	408	282	392	297	259	123		
M	F	M	F	M	F	M	F	M	F	M	F		
10	10	24	24	18	18	16	15	14	11	88	88	99	9
10	10	23	24	18	17	16	14	11	9	86	84	96	8
10	10	21	23	17	16	15	13	9	8	82	80	90	8
10	10	20	21	15	15	12	11	8	7	78	78	80	7
10	10	19	21	15	15	10	9	8	6	76	74	75	6
9	10	18	20	14	14	10	9	8	6	74	74	70	6
9	10	18	19	14	14	9	8	8	6	72	70	65	5
9	9	17	18	13	13	9	8	7	6	70	68	60	5
8	9	15	17	12	12	8	8	7	5	66	60	50	5
8	8	13	15	10	10	8	7	6	5	62	60	40	5
8	8	11	14	8	10	7	6	6	5	60	60	35	5
7	8	9	13	7	8	6	6	5	5	58	58	30	4
7	7	8	12	5	6	6	5	5	4	58	58	25	4
6	7	6	10	4	6	6	5	5	4	56	56	20	4
5	5	5	5	3	4	5	4	4	3	50	50	10	3
4	4	5	5	2	3	4	3	3	2	48	48	4	2
3	1	4	3	0	1	3	1	2	0	44	28	1	1

COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI
5	10	15	30	25	50	35	70
6	12	16	32	26	52	36	72
7	14	17	34	27	54	37	74
8	16	18	36	28	56	38	76
9	18	19	38	29	58	39	78
10	20	20	40	30	60	40	80
11	22	21	42	31	62	41	82
12	24	22	44	32	64	42	84
13	26	23	46	33	66	43	86
14	28	24	48	34	68	44	88
						45	90

---

[1] Motor ability data was not available for females, age 4

APPENDIX I (Continued)

STATE OF NEW JERSEY: MOTOR ABILITY NORMS

AGE 6

GROSS BODY COORD.		BALANCE-POST. ORIENT.		EYE-HAND COORD.		EYE-HAND ACCURACY		EYE-FOOT ACCURACY		MOTOR ABILITY INDEX		%	STANINE
N=179	125	206	127	258	120	183	99	150	83	186	103		
M	F	M	F	M	F	M	F	M	F	M	F		
10	10	24	24	18	18	18	17	10	10	88	82	99	9
10	10	24	24	18	18	15	14	10	9	86	78	96	8
10	10	22	23	17	17	13	12	9	8	82	74	90	8
10	10	20	21	15	14	10	10	8	8	74	70	80	7
10	10	19	20	15	14	9	8	8	8	72	70	75	6
9	10	18	18	14	13	8	8	8	8	70	68	70	6
9	9	16	16	13	12	8	8	8	8	68	68	65	6
9	9	15	15	12	10	8	8	8	8	66	66	60	5
8	9	12	11	9	7	7	7	8	7	64	64	50	5
8	8	9	8	8	6	6	6	7	5	60	58	40	5
6	6	8	8	6	6	6	6	6	5	59	56	35	5
6	6	6	7	6	5	6	5	5	4	58	56	30	4
6	6	6	7	5	5	6	5	5	3	56	54	25	4
5	5	5	6	5	4	5	5	3	2	52	54	20	4
5	5	5	5	3	4	4	3	2	0	48	45	10	3
3	4	3	5	3	3	3	3	0	0	38	36	4	2
1	3	0	4	1	1	0	1	0	0	32	28	1	1

AGE 7

N=218	206	272	206	204	194	237	158	246	169	169	100		
M	F	M	F	M	F	M	F	M	F	M	F		
10	10	24	24	18	18	16	14	15	15	90	84	99	9
10	10	24	24	18	18	15	13	14	14	86	80	96	8
10	10	24	24	18	18	12	11	12	12	82	78	90	8
10	10	22	22	17	17	10	10	10	10	82	72	80	7
10	10	21	22	16	17	10	9	9	10	72	68	75	6
10	10	21	21	16	16	9	9	9	9	72	66	70	6
10	10	21	21	16	15	9	8	8	8	70	64	65	6
9	10	20	18	15	15	8	8	8	8	70	62	60	5
9	9	18	17	14	14	8	8	8	8	64	58	50	5
8	8	16	15	13	12	8	7	7	7	62	56	40	5
8	8	15	15	12	11	7	6	6	6	60	54	35	5
8	8	11	12	12	8	7	6	6	6	58	54	30	4
8	7	8	9	10	7	6	6	6	5	56	52	25	4
6	6	8	8	9	6	6	6	5	4	52	50	20	4
5	5	5	5	6	3	4	4	3	2	40	42	10	3
4	3	4	5	5	3	3	2	1	1	32	28	4	2
2	1	3	3	4	1	1	0	0	0	17	17	1	1

COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI
5	10	15	30	25	50	35	70
6	12	16	32	26	52	36	72
7	14	17	34	27	54	37	74
8	16	18	36	28	56	38	76
9	18	19	38	29	58	39	78
10	20	20	40	30	60	40	80
11	22	21	42	31	62	41	82
12	24	22	44	32	64	42	84
13	26	23	46	33	66	43	86
14	28	24	48	34	68	44	88
						45	90

APPENDIX I (Continued)

STATE OF NEW JERSEY: MOTOR ABILITY NORMS

AGE 8

GROSS BODY COORD.		BALANCE POST. ORIENT.		EYE-HAND COORD.		EYE-HAND ACCURACY		EYE-FOOT ACCURACY		MOTOR ABILITY INDEX		%	STANINE
N= 82	55	58	71	62	61	63	44	62	48	83	51		
M	F	M	F	M	F	M	F	M	F	M	F		
10	10	24	24	18	18	16	18	14	18	88	96	99	9
10	10	24	24	18	18	16	16	11	18	88	96	96	8
10	10	24	24	18	18	14	16	10	16	86	94	90	8
10	10	24	21	17	16	12	14	9	15	84	92	80	7
10	10	24	21	17	16	11	14	8	15	80	90	75	6
10	10	23	20	16	16	10	12	8	14	76	86	70	6
10	10	23	18	16	16	9	12	7	12	72	78	65	6
10	10	22	18	14	15	9	11	7	12	70	74	60	5
10	10	21	15	13	14	8	10	6	10	66	64	50	5
10	8	18	12	10	12	5	8	5	8	58	60	40	5
10	8	17	10	9	11	5	8	5	7	54	60	35	5
9	8	15	10	8	10	4	7	4	6	54	54	30	4
9	8	14	8	7	9	4	6	3	4	52	52	25	4
8	6	12	8	7	9	4	5	3	4	50	50	20	4
5	5	5	4	6	6	3	4	2	1	40	38	10	3
4	4	5	2	5	4	3	4	0	0	18	30	4	2
3	1	5	2	4	2	1	2	0	0	13	18	1	1

COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI
5	10	15	30	25	50	35	70
6	12	16	32	26	52	36	72
7	14	17	34	27	54	37	74
8	16	18	36	28	56	38	76
9	18	19	38	29	58	39	78
10	20	20	40	30	60	40	80
11	22	21	42	31	62	41	82
12	24	22	44	32	64	42	84
13	26	23	46	33	66	43	86
14	28	24	48	34	68	44	88
						45	90

APPENDIX J

TABLES OF NUMBERS[1]

Directions for use of the Conversion Tables

1. Record all raw data on the "tally sheet."
2. Accumulate frequency scores (check to insure the "N" is correct).
3. Locate the Table of Numbers for the "N" of your population.
4. Place the tally sheet adjacent to the correct "N" table and proceed as indicated in the following example. (Seeking the raw score for the percentile; N = 78:
   a. locate P_4 for "N" of 78; the number indicated is "3." Thus, 4 percent of 78 subjects is "3."
   b. locate the "cf" column on your tally sheet and identify the "cf" of "3"; the "typed" raw score number to the left of "3" is the raw score the subject must attain to achieve the 4th percentile.

Note: Assuming the "cf" column only has numbers "2" and "4," you select the raw score adjacent to the "cf" score of "4." Rule to remember: when the percentage of cases you are seeking falls between two "cf" scores, you *always* select the higher raw score as being representative of the percentile in question.

   c. record the raw score identified in the left hand column on the tally sheet adjacent to P_4.
   d. proceed in a similar manner to determine all percentile scores on your tally sheet.

5. The Tables of Numbers have been established for sample sizes ranging from 30 to 199. However, you can use the tables to identify the percentage of "N" you are seeking regardless of size via the following procedure:
   a. data: N of 279; seeking 70 percent of 279.
   b. locate the "N" Table for 79.
   c. identify the number that is representative of P_{70} (i.e., 55).
   d. locate the "N" Table for 100. (Actually, in most instances, steps "d" through "h" can be computed mentally.)
   e. identify the number that is representative of P_{70} (i.e., 70).
   f. multiply 2 x 70 (i.e., 140).
   g. add 55 and 140 (i.e., 195).
   h. therefore, 70 percent of 279 is 195.

---

[1] Source: Thomas M. Vodola, *Descriptive Statistics Made Easy for the Classroom Teacher,* c 1974, pp. 23-32, 36. Reprinted by permission of the author, P.O. Box 93, Neptune City, New Jersey.

DETERMINING THE PERCENTAGE OF CASES SOUGHT

TABLES 30 to 39

N=	30	31	32	33	34	35	36	37	38	39	=N
P99	30	31	32	33	34	35	36	37	38	39	P99
96	29	30	31	32	33	34	35	36	36	37	96
90	27	28	29	30	31	32	32	33	34	35	90
80	24	25	26	26	27	28	29	30	30	31	80
75	23	23	24	25	26	26	27	28	29	29	75
70	21	22	22	23	24	25	25	26	27	27	70
65	20	20	21	21	22	23	23	24	25	25	65
60	18	19	19	20	20	21	22	22	23	23	60
50	15	16	16	17	17	18	18	19	19	20	50
40	12	12	13	13	14	14	14	15	15	16	40
35	11	11	11	12	12	12	13	13	13	14	35
30	9	9	10	10	10	11	11	11	11	12	30
25	8	8	8	8	9	9	9	9	10	10	25
20	6	6	6	7	7	7	7	7	8	8	20
10	3	3	3	3	3	3	4	4	4	4	10
P1	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	P1

TABLES 40 to 49

N=	40	41	42	43	44	45	46	47	48	49	=N
P99	40	41	42	43	44	45	46	47	48	49	P99
96	38	39	40	41	42	43	44	45	46	47	96
90	36	37	38	39	40	41	41	42	43	44	90
80	32	33	34	34	35	36	37	38	38	39	80
75	30	31	32	32	33	34	35	35	36	37	75
70	28	29	29	30	31	32	32	33	34	34	70
65	26	27	27	28	29	29	30	31	31	32	65
60	24	25	25	26	26	27	28	28	29	29	60
50	20	21	21	22	22	23	23	24	24	25	50
40	16	16	17	17	18	18	18	19	19	20	40
35	14	14	15	15	15	16	16	16	17	17	35
30	12	12	13	13	13	14	14	14	14	15	30
25	10	10	11	11	11	11	12	12	12	12	25
20	8	8	8	9	9	9	9	9	10	10	20
10	4	4	4	4	4	5	5	5	5	5	10
4	2	2	2	2	2	2	2	2	2	2	4
P 1	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	P 1

APPENDIX J (Continued)

DETERMINING THE PERCENTAGE OF CASES SOUGHT

TABLES 50 to 59

N=	50	51	52	53	54	55	56	57	58	59	=N
P99	50	50	51	52	53	54	55	56	57	58	P99
96	48	49	50	51	52	53	54	55	56	57	96
90	45	46	47	48	49	50	50	51	52	53	90
80	40	41	42	42	43	44	45	46	46	47	80
75	38	38	39	40	41	41	42	43	44	44	75
70	35	36	36	37	38	39	39	40	41	41	70
65	33	33	34	34	35	36	36	37	38	38	65
60	30	31	31	32	32	33	34	34	35	35	60
50	25	26	26	27	27	28	28	29	29	30	50
40	20	20	21	21	22	22	22	23	23	24	40
35	18	18	18	19	19	19	20	20	20	21	35
30	15	15	16	16	16	17	17	17	17	18	30
25	13	13	13	13	14	14	14	14	15	15	25
20	10	10	10	11	11	11	11	11	12	12	20
10	5	5	5	5	5	6	6	6	6	6	10
4	2	2	2	2	2	2	2	2	2	2	4
P 1	.5	.5	.5	.5	.5	.6	.6	.6	.6	.6	P 1

TABLES 60 to 69

N=	60	61	62	63	64	65	66	67	68	69	=N
P99	59	60	61	62	63	64	65	66	67	68	P99
96	58	59	60	61	61	62	63	64	65	66	96
90	54	55	56	57	58	59	59	60	61	62	90
80	48	49	50	51	51	52	53	54	54	55	80
75	45	46	47	47	48	49	50	50	51	52	75
70	42	43	43	44	45	46	46	47	48	48	70
65	39	40	40	41	42	42	43	44	44	45	65
60	36	37	37	38	38	39	40	40	41	41	60
50	30	31	31	32	32	33	33	34	34	35	50
40	24	24	25	25	26	26	26	27	27	28	40
35	21	21	22	22	22	23	23	23	24	24	35
30	18	18	19	19	19	20	20	20	20	21	30
25	15	15	16	16	16	16	17	17	17	17	25
20	12	12	12	13	13	13	13	13	14	14	20
10	6	6	6	6	6	7	7	7	7	7	10
4	2	2	2	3	3	3	3	3	3	3	4
P 1	.6	.6	.6	.6	.6	.7	.7	.7	.7	.7	P 1

APPENDIX J (Continued)

DETERMINING THE PERCENTAGE OF CASES SOUGHT

TABLES 70 to 79

N=	70	71	72	73	74	75	76	77	78	79	=N
P99	69	70	71	72	73	74	75	76	77	78	P99
96	67	68	69	70	71	72	73	74	75	76	96
90	63	64	65	66	67	68	68	69	70	71	90
80	56	57	58	58	59	60	61	62	62	63	80
75	53	53	54	55	56	56	57	58	59	59	75
70	49	50	50	51	52	53	53	54	55	55	70
65	46	46	47	47	48	49	49	50	51	51	65
60	42	43	43	44	44	45	46	46	47	47	60
50	35	36	36	37	37	38	38	39	39	40	50
40	28	28	29	29	30	30	30	31	31	32	40
35	25	25	25	26	26	26	27	27	27	28	35
30	21	21	22	22	22	23	23	23	23	24	30
25	18	18	18	18	19	19	19	19	20	20	25
20	14	14	14	15	15	15	15	15	16	16	20
10	7	7	7	7	7	8	8	8	8	8	10
4	3	3	3	3	3	3	3	3	3	3	4
P 1	.7	.7	.7	.7	.7	.8	.8	.8	.8	.8	1

TABLES 80 to 89

N=	80	81	82	83	84	85	86	87	88	89	=N
P99	79	80	81	82	83	84	85	86	87	88	P99
96	77	78	79	80	81	82	83	84	85	86	96
90	72	73	74	75	76	77	77	78	79	80	90
80	64	65	66	66	67	68	69	70	70	71	80
75	60	61	62	62	63	64	65	65	66	67	75
70	56	57	57	58	59	60	60	61	62	62	70
65	52	53	53	54	55	55	56	57	57	58	65
60	48	49	49	50	50	51	52	52	53	53	60
50	40	41	41	42	42	43	43	44	44	45	50
40	32	32	33	33	34	34	34	35	35	36	40
35	28	28	29	29	29	30	30	30	31	31	35
30	24	24	25	25	25	26	26	26	26	27	30
25	20	20	21	21	21	21	22	22	22	22	25
20	16	16	16	17	17	17	17	17	18	18	20
10	8	8	8	8	8	9	9	9	9	9	10
4	3	3	3	3	3	3	3	3	4	4	4
P 1	.8	.8	.8	.8	.8	.9	.9	.9	.9	.9	P 1

APPENDIX J (Continued)

DETERMINING THE PERCENTAGE OF CASES SOUGHT

TABLES 90 to 99

N=	90	91	92	93	94	95	96	97	98	99	=N
P99	89	90	91	92	93	94	95	96	97	98	P99
96	86	87	88	89	90	91	92	93	94	95	96
90	81	82	83	84	85	86	86	87	88	89	90
80	72	73	74	74	75	76	77	78	78	79	80
75	68	68	69	70	71	71	72	73	74	74	75
70	63	64	64	65	66	67	67	68	69	69	70
65	59	59	60	60	61	62	62	63	64	64	65
60	54	55	55	56	56	57	58	58	59	59	60
50	45	46	46	47	47	48	48	49	49	50	50
40	36	36	37	37	38	38	38	39	39	40	40
35	32	32	32	33	33	33	34	34	34	35	35
30	27	27	28	28	28	29	29	29	29	30	30
25	23	23	23	23	24	24	24	24	25	25	25
20	18	18	18	19	19	19	19	19	20	20	20
10	9	9	9	9	9	10	10	10	10	10	10
4	4	4	4	4	4	4	4	4	4	4	4
P 1	.9	.9	.9	9	.9	1.0	1.0	1.0	1.0	1.0	P 1

TABLES 100 to 109

N=	100	101	102	103	104	105	106	107	108	109	=N
P99	99	100	101	102	103	104	105	106	107	108	P99
96	96	97	98	99	100	101	102	103	104	105	96
90	90	91	92	93	94	95	95	96	97	98	90
80	80	81	82	82	83	84	85	86	86	87	80
75	75	76	77	78	78	79	80	80	81	82	75
70	70	71	71	72	73	74	74	75	76	76	70
65	65	66	66	67	68	68	69	70	70	71	65
60	60	61	61	62	62	63	64	64	65	65	60
50	50	51	51	52	52	53	53	54	54	55	50
40	40	40	41	41	42	42	42	43	43	44	40
35	35	35	36	36	36	37	37	37	38	38	35
30	30	30	31	31	31	32	32	32	32	33	30
25	25	25	26	26	26	26	27	27	27	27	25
20	20	20	20	21	21	21	21	21	22	22	20
10	10	10	10	10	10	11	11	11	11	11	10
4	4	4	4	4	4	4	4	4	4	4	4
P 1	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	P 1

APPENDIX J (Continued)

DETERMINING THE PERCENTAGE OF CASES SOUGHT

TABLES 110 to 119

N=	110	111	112	113	114	115	116	117	118	119	=N
P99	109	110	111	112	113	114	115	116	117	118	P99
96	106	107	108	108	109	110	111	112	113	114	96
90	99	100	101	102	103	104	104	105	106	107	90
80	88	89	90	90	91	92	93	94	94	95	80
75	83	83	84	85	86	86	87	88	89	89	75
70	77	78	78	79	80	81	81	82	83	83	70
65	72	72	73	73	74	75	75	76	77	78	65
60	66	67	67	68	68	69	70	70	71	71	60
50	55	56	56	57	57	58	58	59	59	60	50
40	44	44	45	45	46	46	46	47	47	48	40
35	39	39	39	40	40	40	41	41	41	42	35
30	33	33	34	34	34	35	35	35	35	36	30
25	28	28	28	28	29	29	29	29	30	30	25
20	22	22	22	23	23	23	23	23	24	24	20
10	11	11	11	11	11	12	12	12	12	12	10
4	4	4	4	5	5	5	5	5	5	5	4
P 1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	P 1

TABLES 120 to 129

N=	120	121	122	123	124	125	126	227	128	129	=N
P99	119	120	121	122	123	124	125	126	127	128	P99
96	115	116	117	118	119	120	121	122	123	124	96
90	108	109	110	111	112	113	113	114	115	116	90
80	96	97	98	98	99	100	101	102	102	103	80
75	90	91	92	92	93	94	95	95	96	97	75
70	84	85	85	86	87	88	88	89	90	90	70
65	78	79	79	80	81	81	82	83	83	84	65
60	72	73	73	74	74	75	76	77	77	77	60
50	60	61	61	62	62	63	63	64	64	65	50
40	48	49	49	49	50	50	50	51	51	52	40
35	42	42	43	43	43	44	44	44	45	45	35
30	36	36	37	37	37	38	38	38	38	39	30
25	30	30	31	31	31	31	32	32	32	32	25
20	24	24	24	25	25	25	25	25	26	26	20
10	12	12	12	12	12	13	13	13	13	13	10
4	5	5	5	5	5	5	5	5	5	5	4
P 1	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	P 1

APPENDIX J (Continued)

DETERMINING THE PERCENTAGE OF CASES SOUGHT

TABLES 130 to 139

N=	130	131	132	133	134	135	136	137	138	139	=N
P99	129	130	131	132	133	134	135	136	137	137	P99
96	125	126	127	128	129	130	131	132	132	133	96
90	117	118	119	120	121	122	122	123	124	125	90
80	104	105	106	106	107	108	109	110	110	111	80
75	98	98	99	100	101	101	102	103	104	104	75
70	91	92	92	93	94	95	95	96	97	97	70
65	85	85	86	86	87	88	88	89	90	90	65
60	78	79	79	80	80	81	82	82	83	83	60
50	65	66	66	67	67	68	68	69	69	70	50
40	52	52	53	53	54	54	54	55	55	56	40
35	46	46	46	47	47	47	48	48	48	49	35
30	39	39	40	40	40	41	41	41	41	42	30
25	33	33	33	33	34	34	34	34	35	35	25
20	26	26	26	27	27	27	27	27	28	29	20
10	13	13	13	13	13	14	14	14	14	14	10
4	5	5	5	5	5	5	5	5	6	6	4
P 1	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	P 1

TABLES 140 to 149

N=	140	141	142	143	144	145	146	147	148	149	=N
P99	139	140	141	142	143	144	145	146	147	148	P99
96	134	135	136	137	138	139	140	141	142	143	96
90	126	127	128	129	130	131	131	132	133	134	90
80	112	113	114	114	115	116	117	118	118	119	80
75	105	106	107	107	108	109	110	110	111	112	75
70	98	99	99	100	101	102	102	103	104	104	70
65	91	92	92	93	94	94	95	96	96	97	65
60	84	85	85	86	86	87	88	88	89	89	60
50	70	71	71	72	72	73	73	74	74	75	50
40	56	56	57	57	58	58	58	59	59	60	40
35	48	49	50	50	50	51	51	51	52	52	35
30	42	42	43	43	43	44	44	44	44	45	30
25	35	35	36	36	36	36	37	37	37	37	25
20	28	28	28	29	29	29	29	29	30	30	20
10	14	14	14	14	14	15	15	15	15	15	10
4	6	6	6	6	6	6	6	6	6	6	4
P 1	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	P 1

APPENDIX J (Continued)

DETERMINING THE PERCENTAGE OF CASES SOUGHT

TABLES 150 to 159

N=	150	151	152	153	154	155	156	157	158	159	=N
P99	149	149	150	151	152	153	154	155	156	157	P99
96	144	145	146	147	148	149	150	151	152	153	96
90	135	136	137	138	139	140	140	141	142	143	90
80	120	121	122	122	123	124	125	126	126	127	80
75	113	113	114	115	116	116	117	118	119	119	75
70	105	105	106	107	108	109	109	110	111	111	70
65	98	98	99	99	100	101	101	102	103	103	65
60	90	91	91	92	92	93	94	94	95	95	60
50	75	76	76	77	77	78	78	79	79	80	50
40	60	60	61	61	62	62	62	63	63	64	40
35	53	53	53	54	54	55	55	55	55	56	35
30	45	45	46	46	46	47	47	47	47	48	30
25	38	38	38	38	39	39	39	39	40	40	25
20	30	30	30	31	31	31	31	31	32	32	20
10	15	15	15	15	15	16	16	16	16	16	10
4	6	6	6	6	6	6	6	6	6	6	4
P 1	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	P 1

TABLES 160 to 169

N=	160	161	162	163	164	165	166	167	168	169	=N
P99	158	159	160	161	162	163	164	165	166	167	P99
96	154	155	156	156	157	158	159	160	161	162	96
90	144	145	146	147	148	149	149	150	151	152	90
80	128	128	130	130	131	132	133	134	134	135	80
75	120	121	122	122	123	124	125	125	126	127	75
70	112	113	113	114	115	116	116	117	118	118	70
65	104	105	105	106	107	107	108	109	109	110	65
60	96	97	97	98	98	99	100	100	101	101	60
50	80	81	81	82	82	83	83	84	84	85	50
40	64	64	65	65	66	66	66	67	67	68	40
35	56	56	57	57	57	58	58	58	59	59	35
30	48	48	49	49	49	50	50	50	50	51	30
25	40	40	41	41	41	41	42	42	42	42	25
20	32	32	33	33	33	33	33	33	34	34	20
10	16	16	16	16	16	17	17	17	17	17	10
4	6	6	6	7	7	7	7	7	7	7	4
P 1	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	P 1

APPENDIX J (Continued)

DETERMINING THE PERCENTAGE OF CASES SOUGHT

TABLES 170 to 179

N=	170	171	172	173	174	175	176	177	178	179	=N
P99	168	169	170	171	172	173	174	175	176	177	P99
96	163	164	165	166	167	168	169	170	171	172	96
90	153	154	155	156	157	158	158	159	160	161	90
80	136	137	138	138	139	140	141	142	142	143	80
75	128	128	129	130	131	131	132	133	134	134	75
70	119	120	120	121	122	123	123	124	125	125	70
65	111	111	112	112	113	114	114	115	116	116	65
60	102	103	103	104	104	105	106	106	107	107	60
50	85	86	86	87	87	88	88	89	89	90	50
40	68	68	69	69	70	70	70	71	71	72	40
35	60	60	60	61	61	61	62	62	62	63	35
30	51	51	52	52	52	53	53	53	53	54	30
25	43	43	43	43	44	44	44	44	45	45	25
20	34	34	34	35	35	35	35	35	36	36	20
10	17	17	17	17	17	17	18	18	18	18	10
4	7	7	7	7	7	7	7	7	7	7	4
P 1	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	P 1

TABLES 180 to 189

N=	180	181	182	183	184	185	186	187	188	189	=N
P99	178	179	180	181	182	183	184	185	186	187	P99
96	173	174	175	176	177	178	179	180	180	181	96
90	162	163	164	165	166	167	167	168	169	170	90
80	144	145	146	146	147	148	149	150	150	151	80
75	135	136	137	137	138	139	140	140	141	142	75
70	126	127	127	128	129	130	130	131	132	132	70
65	117	118	118	119	120	121	121	122	122	123	65
60	108	109	109	110	110	111	112	112	113	113	60
50	90	91	91	92	92	93	93	94	94	95	50
40	72	72	73	73	74	74	74	75	75	76	40
35	63	63	64	64	64	65	65	65	66	66	35
30	54	54	55	55	55	56	56	56	56	57	30
25	45	45	46	46	46	46	47	47	47	47	25
20	36	36	36	37	37	37	37	37	38	38	20
10	18	18	18	18	18	19	19	19	19	19	10
4	7	7	7	7	7	7	7	7	8	8	4
P 1	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	P 1

APPENDIX J (Continued)

DETERMINING THE PERCENTAGE OF CASES SOUGHT

TABLES 190 to 199

N=	190	191	192	193	194	195	196	197	198	199	=N
P99	188	189	190	191	192	193	194	195	196	197	P99
96	182	183	184	185	186	187	188	189	190	191	96
90	171	172	173	174	175	176	176	177	178	179	90
80	152	153	154	154	155	156	157	158	158	159	80
75	143	143	144	145	146	146	147	148	149	149	75
70	133	134	134	135	136	137	137	138	139	139	70
65	124	124	125	125	126	127	127	128	129	129	65
60	114	115	115	116	116	117	118	118	119	119	60
50	95	96	96	97	97	98	98	99	99	100	50
40	76	76	77	77	78	78	78	79	79	80	40
35	67	67	67	68	68	68	69	69	69	70	35
30	57	57	58	58	58	59	59	59	59	60	30
25	48	48	48	48	49	49	49	49	50	50	25
20	38	38	38	39	39	39	39	39	40	40	20
10	19	19	19	19	19	20	20	20	20	20	10
4	8	8	8	8	8	8	8	8	8	8	4
P 1	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	P 1

APPENDIX J (Continued)

TOWNSHIP OF OCEAN SCHOOL DISTRICT

RAW SCORE TALLY SHEET

N= ______

EVENT __________ SEASON ____________ AGE ____ SEX ___ SCHOOL ______________

Directions: Tally all raw scores as follows–

Percentiles
99 ____
96 ____
90 ____
80 ____
75 ____
70 ____
65 ____
60 ____
50 ____
40 ____
35 ____
30 ____
25 ____
20 ____
10 ____
4 ____
1 ____

100-
99-
98-
97-
96-
95-
94-
93-
92-
91-
90-
89-
88-
87-
86-
85-
84-
83-
82-
81-
80-
79-
78-
77-
76-

75-
74-
73-
72-
71-
70-
69-
68-
67-
66-
65-
64-
63-
62-
61-
60-
59-
58-
57-
56-
55-
54-
53-
52-
51-

50-
49-
48-
47-
46-
45-
44-
43-
42-
41-
40-
39-
38-
37-
36-
35-
34-
33-
32-
31-
30-
29-
28-
27-
26-

25-
24-
23-
22-
21-
20-
19-
18-
17-
16-
15-
14-
13-
12-
11-
10-
9-
8-
7-
6-
5-
4-
3-
2-
1-
0

APPENDIX K

CHARACTERISTICS OF STUDENTS WHO NEED PERCEPTUAL-MOTOR TRAINING[1]

Name: ______________________ Age: _____ Sex: _______ Date: _______

School: ______________________ Teacher: ______________________

This checklist is to be completed by the classroom teacher, speech therapist, or physical education instructor. The observations should be made during regular class periods without the knowledge of the student being observed. The observation should be over a period of time sufficient for an objective view of the student.

1. Fails to show opposition of limbs in walking, sitting, throwing.
2. Sits or stands with poor posture.
3. Does not transfer weight from one foot to the other when throwing.
4. Cannot name body parts or move them on command.
5. Has poor muscle tone (tense or flaccid).
6. Uses one extremity much more often than the other.
7. Cannot use arm with "overflow" movements from other body parts.
8. Cannot jump rope.
9. Cannot clap out a rhythm with both hands or stamp rhythm with feet.
10. Has trouble crossing the midline of the body at chalkboard or in ball handling.
11. Often confuses right and left sides.
12. Confuses vertical, horizontal, up, down directions.
13. Cannot hop or maintain balance in squatting.
14. Has trouble getting in and out of seat.
15. Approaches new tasks with excessive clumsiness.
16. Fails to plan movements before initiating task.
17. Walks or runs with awkward gait.
18. Cannot tie shoes, use scissors, manipulate small objects.
19. Cannot identify fingers as they are touched without vision.
20. Has messy handwriting.
21. Experiences difficulty tracing over line or staying between lines.
22. Cannot discriminate tactually between different coins or fabrics.
23. Cannot imitate body postures and movements.
24. Demonstrates poor ocular control, unable to maintain eye contact with moving objects, loses place while reading.
25. Lacks body awareness; bumps into things; spills and drops objects.
26. Appears excessively tense and anxious; cries or angers easily.
27. Responds negatively to physical contact; avoids touch.

---

[1] Adapted by Dr. Claudine Sherrill, Texas Woman's University at Denton, from Title III ESEA Project Materials printed by Goleta Union School District, Goleta, California. (Permission to publish granted.)

APPENDIX K (Continued)

28. Craves to be touched or held.
29. Overracts to high frequency noise, bright lights, odors.
30. Exhibits difficulty in concentrating.
31. Shows tendency to fight when standing in line or in crowds.
32. Avoids group games and activities; spends most of time alone.
33. Complains of clothes irritating skin; avoids wearing coat.
34. Does not stay in assigned place; moves about excessively.
35. Uses either hand in motor activities.
36. Avoids using the left side of body.
37. Cannot walk sideward to either direction on balance beam.
38. Holds one shoulder lower than the other.
39. Cannot hold a paper in place with one hand while writing with the other.
40. Avoids turning to the left whenever possible.
41. Cannot assemble puzzles which offer no difficulty to peers.
42. Cannot match basic geometric shapes to each other visually.
43. Cannot recognize letters and numbers.
44. Cannot differentiate background from foreground in a picture.
45. Cannot identify hidden figures in a picture.
46. Cannot catch balls.
47. Cannot relate the body to environmental space. Is unable to move between or through objects guided by vision and an awareness of body dimensions.
48. Seems "lost in space," confuses, north, south, east, and west.

APPENDIX L

ANSWERS FOR PROBLEMS CITED IN TEACHING LEARNING EXPERIENCE

Answer for Problem No. 1: Computing Raw Scores

Gross Body Coordination	Attempts	Raw Score
Walk	++	2
Creep	++	2
Climb	00	2
Skip	00	0
March-in-Place	00	0
	Total	6

Balance	Attempts	Raw Score
Stand both feet	+00	1
Stand right foot	000	0
Stand left foot	++0	2
Jump one foot	+0+	2
Jump both feet	++0	2
Hop both feet	0++	2
Hop right foot	0++	2
Hop left foot	+++	3
	Total	14

Eye and Hand Coordination	Attempts	Raw Score
Catch	+++	3
Ball bounce and catch	+0+	2
Touch ball (lateral)	+00	1
Touch ball (fore and aft)	00+	1
Bat ball (one hand)	0+0	1
Ball bat (bat)	+++	3
	Total	11

Eye and Foot Accuracy	Attempts	Raw Score
Kick right foot	223	7
Kick left foot	123	6
	Total	13

Eye and Hand Accuracy	Attempts	Raw Score
Throw, right hand		7
Throw, left hand		5
	Total	12

Composite Raw Score	
Gross Body Coordination	6
Balance	14
Eye and Hand Coordination	11
Eye and Foot Accuracy	13
Eye and Hand Accuracy	12
Total	56

APPENDIX L (Continued)

Answer for Problem No. 2: Determining Percentile and Stanine Scores

Test Factors	Raw Score	Percentile	Stanine
Gross Body Coordination	6	10	3
Balance and Postural Orientation	14	35	5
Eye and Hand Coordination	11	25	4
Eye and Hand Accuracy	12	96	8
Eye and Foot Accuracy	13	96	8
	56		28

Answer for Problem No. 3: Determining the Motor Ability Index (M.A.I.)

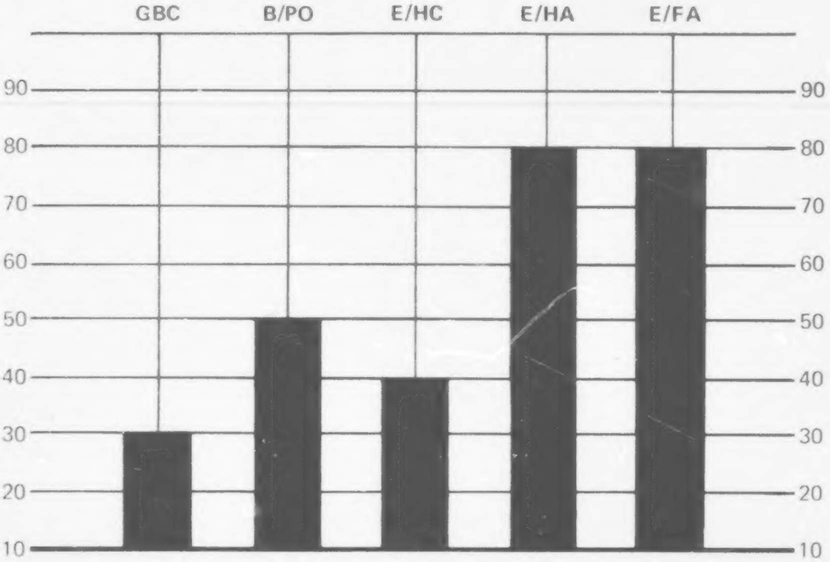
$$\text{MAI} = \frac{(\text{Composite Stanine}) \times 10}{\text{Number of Test Factors}}$$

$$\text{MAI} = \frac{28 \times 10}{5} = \frac{280}{5} = 56$$

$$\text{MAI} = 56$$

Answer for Problem No. 4: Construct an Individual Profile Chart

MOTOR ABILITY PROFILE CHART



APPENDIX L (Continued)

Answer for Problem No. 5: Convert Stanine Scores to Time Prescription

MOTOR ABILITY TIME PRESCRIPTION CHART

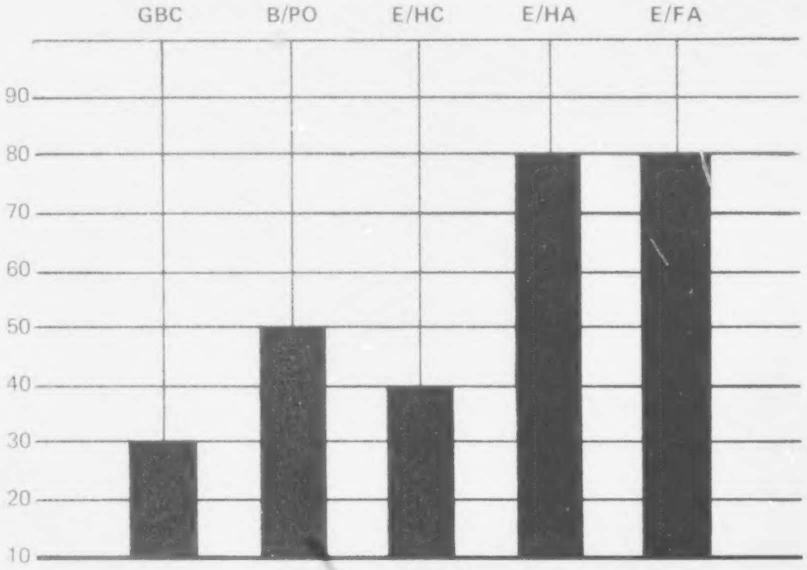
Total Deviation Points ______
Below 90

Total Exercising Time $\frac{5}{170/900}$

Prescription Time Multiplier 5

Adjustment Time 50

Computation



Deviation Points Below 90	60	40	50	10	10	170
Prescription Time Multiplier	5	5	5	5	5	
						(sec)
Sub-Total	300	200	250	50	50	850
						(sec)
Adjustment Time	50					50
						(sec)
Total Prescription Time Per Exercise (In Seconds)	350	200	250	50	50	900
In Minutes and Seconds	5:50	3:20	4:10	:50	:50	15:00

APPENDIX L (Continued)

Answer for Problem No. 6: Selection of Tasks and Activities

Factor	Tasks and Activities		Time
GBC	Numbers 2 and 3: Walking forward and staggered on squares*		1 minute
	Numbers 4 and 5: Walking forward and backward on line*		1 minute
	Number 6: Creeping with handprints*		1 minute
	Number 12: Marching-in-place*		1 minute
	Number 13: Climbing stairs*		1 minute, 50 seconds
		Total Time:	5:50
B/PO	Number 3: Push balance		1 minute
	Number 9: Egyptian balance, right foot		1 minute
	Number 14: Swan balance, right foot		1 minute
	Number 13: "V" site		20 seconds
		Total Time:	3:20
E/HC	Number 2: Playing with balloons*		1 minute, 40 seconds
	Number 3: Tapping and catching a whiffleball*		1 minute
	Number 4: Batting whiffleball, push style*		1 minute
	Number 8: Ball rolling*		1 minute, 10 seconds
		Total Time:	4:50
E/HA	Number 1: Throwing for accuracy*		50 seconds
E/FA	Number 4: Ball kick off tee*		50 seconds

Note: The tasks and activities cited are also "number coded" with the resource materials listed in Chapter VI so that the reader can better understand the prescription. The asterisks (*) identify those tasks that were selected in accordance with the "process" information gathered during initial testing. Obviously one's choice of activities can vary from those illustrated (for there are many strategies for achieving the same goal). The important point to remember is that the prescription include diversified activities that are selected on the basis of the factors involved, the time prescriptions, and the anecdotal remarks.

APPENDIX M

Male and Female Date: 9/15/73

MOTOR ABILITY TEST, CLASS RECORD SHEET[1]

Grade 2 Name	Age	Walk^{2}	Creep	Climb Stairs	Skip	March	Total Points	Percentile	Stanine	Stand-2 Feet	Stand-R Foot	Stand-L Foot	Jump – One Foot	Jump – Two Feet	Hop – Two Feet	Hop – Right Foot	Hop – Left Foot	Total Points	Percentile	Stanine	Catch^{3}	Ball Bounce	Touch Laterally	Touch Fore and Aft	Bat – Hand	Bat – Bat	Total Points	Percentile	Stanine	Throw – Right^{3}	Throw – Left	Total	Percentile	Stanine	Kick – Right^{3}	Kick – Left	Total Points	Percentile	Stanine	Developmental & Adapted P.E. Comments	Total Stanine	MAI
Doe, J.	7	0	2	0	0	0	2	0	1	0	0	0	3	3	1	1	0	8	9	2	0	1	0	2	3	3	9	15	3	4	6	10	90	8	4	5	9	96	8		22	44
Smith, P.	7	0	2	1	0	0	3	0	1	2	0	0	0	0	1	0	0	3	1	1	3	3	0	3	3	2	14	70	6	0	1	1	4	2	3	8	11	97	9		19	38
Jones, D.	8	2	2	2	0	0	6	10	3	1	0	2	2	2	2	1	3	13	25	4	3	3	0	3	3	2	14	70	6	8	4	12	96	8	5	9	14	98	9		30	60

Directions:

1. Record "attempts passed" under each test item.
2. Total "attempts passed" and convert to percentiles and stanines.
3. Add stanine scores for each factor and record in total stanine column.
4. Convert total stanine score to Motor Ability Index (MAI).

Note: The number above the selected test items (e.g., walk^{2} denotes the number of pupil attempts permitted for each test item related to that factor (e.g., gross body coordination) involves a total of ten attempts.

---

[1] Courtesy of Robert Ekblom, Madison Township Public Schools.

APPENDIX N

GUIDELINES FOR ESTABLISHING A SUMMER PROGRAM[1]
FOR
DEVELOPMENTAL AND ADAPTED PHYSICAL EDUCATION

A. Pre-Class Preparation

1. Compile a list of all referrals; be sure a parental consent slip is signed before the student is scheduled.
2. Scheduling guidelines:

9:00- 9:55	5-7 years	Try to adjust groups so that you have approximately equal numbers in each class.
10:00-10:55	8-9 years	
11:00-11:55	10-11 years	
12:00-12:55	12 & over	

3. Call parents and notify them as to class schedule for their child. If there is a scheduling conflict, adjust schedule by no more than one period. Students are to dress comfortably and must wear gym shoes.
4. Type attendance list for each class (check and record attendance daily).
5. Prepare individual folder for each child. On folder tab list student name, instructional period (1, 2, 3, 4), classification and home phone number.
6. Prepare necessary forms; each folder should include:
   Basic Motor Skill Test Form
   Physical Fitness Test Form
   Perceptual-Motor Achievement Test Form (for recording raw scores)
   Perceptual-Motor Achievement Test
   Parental Permission Form
   Perceptual-Motor Progress Profile
   Individualized Prescription Card
   Asthmatic Testing Material – if applicable
   Weight Control Material – if applicable
   Posture Exercise Material – if applicable
   Weight Training Card – if applicable
   Other daily assignments (coloring, cut-outs, etc.)

B. Individualized Program

1. Facilities (set up each day at 8:30 a.m. and store at 1:00 p.m.).
   Procure necessary materials, supplies and equipment prior to the start of the program.
   Assign student leaders, where possible, to permanent stations for testing; change their instructional stations every week (to provide them with a varied experience).
2. Program
   Pre-test all students during the first week on fitness, motor skill and perceptual-motor batteries. Additional testing should be administered to those students who evidence posture, asthmatic, or other problems.
   Weeks, Two through Five
   Students take prescribed individual program cards to designated areas and perform necessary exercises or activities; upon completion, leaders initial. Upon completion of all tasks, individual prescription cards are returned to respective folders. (**Note:** On the Friday of the initial week, instructors are to take raw score data home, convert to norm scores, plot individual profiles and record pertinent anecdotal remarks and finally prepare an individualized prescription card for each student.) The balance of each period is devoted to individual, or group activities. Incorporate such activities as tinikling, rope jumping and movement experiences.

---

[1] Courtesy of the Township of Ocean School District, Oakhurst, New Jersey.

Week Six

The week is devoted to post-testing; same procedure as week No. 1. Parental conferences are to be held on the Monday following the last week of the program. Interpret individual profiles and inform the parent of activities that may be practiced at home.

C. Enhancing Instructional Effectiveness*

1. Establish a positive, personal relationship by referring to each child by his or her first name and by showing an interest via individual attention.
2. When teaching a new skill, demonstrate or assist the child through the movement pattern as verbalization may not be effective. It may well be that you will have to have the child repeat the skill may times before learning takes place.
3. Patience is essential – especially with the slower learner.
4. Prescribe activities on a sequential basis – from the simple to the complex.
5. Try to involve all sensory modalities so that you maximize learning; through such associated learning experiences the child will progress more rapidly. For example, if you have a child reproducing a triangle, you might have him repeat, "I am drawing a triangle." Thus, you are integrating visual, auditory and tactile sensations. This same procedure is used to teach reading; the child looks at a picture of a dog and the written symbol and learns to associate both. Other examples might be the use of the percept-o-grid where the child spells his name by hopping in the appropriate boxes, etc.
6. Enhance cognition by presenting tasks that require the student to "think" while performing the motor tasks. Examples might be to have the student hop a required number of times on each foot; to contrast pegs in terms of color, lengths of sides of a form, or numbers; and to have the student solve a movement task.
7. Structure activities, or tasks so that success is virtually assured (to maximize learning and minimize frustration. (Lavish praise for the slightest accomplishment.)
8. Enhance skill development by varying the prescribed activity so that the child is required to perform the movement pattern under varied conditions. Constant repetition of one skill will have little, if any, transfer value.
9. With the hyper-active child, prescribe activities that will increase attention span and decrease involuntary movements. Examples might be having the student step over objects as he walks on a balance beam, or games that decelerate movement such as, "Who can get up from the floor the slowest, etc."

---

*Most of the instructional hints can also be used advantageously with students in the regular physical education program.

APPENDIX O

DIRECTIONS FOR PREPARING TIME PRESCRIPTION FORM

1. Type, or print legibly.
2. List complete mailing address (including zip code).
3. Program Time (in minutes): Insert the time for that portion of the period that you desire to individualize instruction. (Note: It is suggested you devote a portion of each period to group/social activities.)
4. Symbols: GBC, Gross Body Coordination; B/PO, Balance/Postural Orientation; E/HC, Eye/Hand Coordination; E/HA, Eye/Hand Accuracy; and E&FA, Eye/Foot Accuracy.
5. Scores: Record the raw scores and stanine scores for each factor; stanine scores should range from 1 to 9.
6. Time: **To be filled in by the Project ACTIVE staff.**
7. Age, Sex, I.Q., M.A.: Information desired by the Project Director so that state-wide norms and national norms can be established.
8. Handicapping Condition: List classified students as EMR, TMR, NI, PI, ED, etc. List non-classified students as LMA (Low Motor Ability), LPV (Low Physical Vitality), or Normal.
9. Subject No.: Spaces have been provided for the submission of stanine scores for 12 subjects. If you have data for more than 12 subjects, reproduce the original sheet and *change the subject nos. accordingly.*

   (Note: Be sure to record scores on the appropriate form (i.e., motor performance scores on the Motor Ability Form and physical fitness scores on the Physical Fitness Form.)
10. Mail form(s) to: Dr. Thomas M. Vodola, Township of Ocean School District, Dow Avenue, Oakhurst, New Jersey 07755, (Phone No.: 201–229-4100, Ext. 260).

RETURN PROCEDURE

1. The Project ACTIVE staff will: feed the data in the mini-computer; record the time prescriptions for each subject; include a packet of resource/tasks activities; and return to the instructor making the request.

PROCEDURE FOR USING RESOURCE TASKS/ACTIVITIES MATERIALS

1. Review packet: You will note activities are grouped according to the five factors (i.e., GBC, B/PO, E/HC, E/HA, and E/FA), or the four physical fitness factors.

2. Prescribe tasks/activities: Identify a child's time prescription for one factor and select tasks from the appropriate section of the manual. For example, if subject no. 1 received a time prescription of 3:20 (three minutes and twenty seconds) for GBC, refer to the section that lists Gross Body Coordination Tasks/Activities and select items for that time duration. (Note: It is suggested that one minute per task be used as a guideline. However, it is only a guideline as the more complex tasks may require more time.)

3. Sequence of tasks within each section: Although an effort was made to sequence tasks from the simple to the complex, the instructor should make the final prescriptive decision and sequence the tasks according to the needs of each child.

APPENDIX O (Continued)

MOTOR ABILITY TIME PRESCRIPTION FORM*, Ages 5-7

Instructor: ______________________ School: ______________________ Phone: ______________

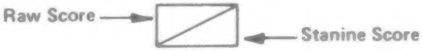
Address: ____ Zip Code: ______________

Program Time: (In Minutes) ______________________

	G.B.C.		B./P.O.		E./H.C.		E./H.A.		E./F.A.		Age	Sex	I.Q.	M.A.	Handicapping Condition
Subject No.	Stanine	Time	Stanine	Time	Stanine	Time	Stanine	Time	Stanine	Time					
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

---

*Please record data as per the Illustration



APPENDIX O (Continued)

MOTOR ABILITY DATA REPORT FORM, Ages 8-11

Instructor: ______________________ School: ______________________ Phone: ______________

Address: ____ Zip Code: ______________

Mental Age Test ______________________

Subject No.	RAW SCORES												Age	Sex	I.Q.[1]	M.A.[1]	Handicapping Condition[2]
	G.B.C.		B./P.O.		E./H.C.		E./H.A.		E./F.A.		MAI						
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post					
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

---

[1] Only requested for classified students.

[2] Handicapping Condition: Normal, LMA (Low Motor Ability), N.I., P.I., E.D., M.R. (Educ.), M.R. (Trainable), other.

APPENDIX O (Continued)

PHYSICAL FITNESS TIME PRESCRIPTION FORM*

Instructor: ____________________ School. ____________________ Phone: ____________

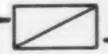
Address: ____ Zip Code: ____________

Program Time: (In Minutes) ____________________

	Arm Hang		Sit-Ups		Standing Br. Jump		Endurance						
Subject No.	Stanine	Time	Stanine	Time	Stanine	Time	Stanine	Time	Age	Sex	I.Q.	M.A.	Handicapping Condition
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													

---

*Please record data as per the illustration



APPENDIX P

Township of Ocean School District

MOTOR ABILITY INDEX CONVERSION CHART
GRADES, 3-6

AGE 8

	RAW SCORES						RAW SCORES					
	Cable Jump		Beam Walk		Ball Bounce		Throw		Kick		%	Stanine
n=	65	66	103	120	125	84	39	43	48	44		
	M	F	M	F	M	F	M	F	M	F		
	10	10	143	137	69	67	16	18	18	17	99	9
	10	10	138	135	67	66	15	17	15	16	96	8
	10	9	130	128	64	64	15	15	15	15	90	8
	9	9	118	120	60	61	13	14	13	13	80	7
	9	8	118	116	58	60	13	13	12	12	75	6
	8	8	114	113	56	59	12	11	12	12	70	6
	8	8	112	108	55	58	12	10	11	11	65	6
	8	8	110	103	54	57	12	10	11	11	60	6
	7	7	99	94	52	55	11	9	10	10	50	5
	6	6	91	87	48	53	10	8	8	8	40	5
	6	5	80	83	47	51	10	7	8	8	35	5
	6	5	73	81	44	50	10	7	7	7	30	4
	5	4	71	74	43	49	9	7	7	7	25	4
	4	3	69	69	42	47	8	6	6	7	20	4
	2	0	59	56	39	43	7	4	5	4	10	3
	0	0	45	43	37	40	5	3	4	4	4	2
	0	0	35	31	36	35	4	2	3	2	1	1

COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI
5	10	15	30	25	50	35	70
6	12	16	32	26	52	36	72
7	14	17	34	27	54	37	74
8	16	18	36	28	56	38	76
9	18	19	38	29	58	39	78
10	20	20	40	30	60	40	80
11	22	21	42	31	62	41	82
12	24	22	44	32	64	42	84
13	26	23	46	33	66	43	86
14	28	24	48	34	68	44	88
						45	90

APPENDIX P (Continued)

AGE 9

	RAW SCORES						RAW SCORES					
	Cable Jump		Beam Walk		Ball Bounce		Throw		Kick		%	Stanine
n =	67	66	117	131	152	140	59	55	56	51		
	M	F	M	F	M	F	M	F	M	F		
	10	10	142	142	72	70	18	17	18	16	99	9
	10	10	141	140	71	68	17	16	17	15	96	8
	10	9	136	135	68	66	16	15	17	15	90	8
	9	9	127	132	64	61	15	14	14	14	80	7
	8	9	125	128	62	60	15	13	13	13	75	6
	8	8	121	126	61	58	14	12	13	13	70	6
	8	8	120	123	60	57	13	12	12	12	65	6
	7	7	119	122	58	56	12	11	12	12	60	6
	7	6	114	116	56	55	12	11	10	11	50	5
	6	5	110	113	53	53	11	10	10	10	40	5
	5	5	108	110	50	52	11	9	9	10	35	5
	5	4	107	109	49	51	11	9	8	9	30	4
	4	4	105	105	48	49	10	8	8	9	25	4
	3	3	102	100	45	47	10	8	8	8	20	4
	1	1	93	85	43	43	7	7	6	6	10	3
	0	0	82	63	40	41	5	6	4	5	4	2
	0	0	72	37	38	38	5	5	3	4	1	1

COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI
5	10	15	30	25	50	35	70
6	12	16	32	26	52	36	72
7	14	17	34	27	54	37	74
8	16	18	36	28	56	38	76
9	18	19	38	29	58	39	78
10	20	20	40	30	60	40	80
11	22	21	42	31	62	41	82
12	24	22	44	32	64	42	84
13	26	23	46	33	66	43	86
14	28	24	48	34	68	44	88
						45	90

APPENDIX P (Continued)

AGE 10

	RAW SCORES						RAW SCORES					
	Cable Jump		Beam Walk		Ball Bounce		Throw		Kick		%	Stanine
n =	86	106	97	111	141	116	70	92	67	55		
	M	F	M	F	M	F	M	F	M	F		
	10	10	142	142	75	72	17	18	18	18	99	9
	10	10	138	135	71	67	6	16	18	16	96	8
	10	10	130	128	67	64	16	16	17	16	90	8
	9	9	129	125	63	60	15	14	16	15	80	7
	8	8	127	123	62	60	15	14	16	14	75	6
	8	8	125	121	61	58	15	13	15	14	70	6
	8	8	123	120	59	58	14	12	13	13	65	6
	8	8	121	117	58	57	13	12	12	12	60	6
	6	7	115	112	55	55	12	11	10	11	50	5
	5	6	112	110	53	52	11	10	9	11	40	5
	4	6	109	106	52	51	11	9	8	10	35	5
	3	5	107	105	51	50	10	9	7	10	30	4
	3	5	106	103	50	48	9	9	7	10	25	4
	2	4	104	100	47	47	9	8	7	8	20	4
	0	2	95	94	44	43	8	7	5	7	10	3
	0	1	83	80	40	37	7	6	4	5	4	2
	0	0	75	73	36	35	6	2	4	5	1	1

COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI
5	10	15	30	25	50	35	70
6	12	16	32	26	52	36	72
7	14	17	34	27	54	37	74
8	16	18	36	28	56	38	76
9	18	19	38	29	58	39	78
10	20	20	40	30	60	40	80
11	22	21	42	31	62	41	82
12	24	22	44	32	64	42	84
13	26	23	46	33	66	43	86
14	28	24	48	34	68	44	88
						45	90

APPENDIX P (Continued)

AGE 11

	RAW SCORES						RAW SCORES					
	Cable Jump		Beam Walk		Ball Bounce		Throw		Kick		%	Stanine
n=	72	63	124	102	212	161	44	61	50	48		
	M	F	M	F	M	F	M	F	M	F		
	10	10	143	140	77	74	17	18	17	17	99	9
	10	10	139	135	73	70	16	17	16	17	96	8
	9	9	136	136	70	67	15	17	15	17	90	8
	8	9	132	131	64	64	14	15	14	15	80	7
	8	9	128	129	64	62	13	14	14	15	75	6
	7	9	126	124	62	61	13	14	13	15	70	6
	7	9	122	121	61	60	12	13	13	14	65	6
	7	9	119	117	58	59	12	12	13	14	60	6
	6	8	117	115	56	56	12	11	11	13	50	5
	5	6	115	112	54	55	11	10	10	12	40	5
	5	5	110	108	52	54	9	10	10	12	35	5
	5	4	108	105	51	52	9	9	9	12	30	4
	5	3	106	102	49	51	9	8	8	11	25	4
	3	3	105	98	47	49	9	8	8	11	20	4
	0	0	100	97	43	44	8	6	7	10	10	3
	0	0	88	92	39	42	7	5	6	6	4	2
	0	0	77	80	37	35	4	4	5	6	1	1

COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI	COMPOSITE STANINES	MAI
5	10	15	30	25	50	35	70
6	12	16	32	26	52	36	72
7	14	17	34	27	54	37	74
8	16	18	36	28	56	38	76
9	18	19	38	29	58	39	78
10	20	20	40	30	60	40	80
11	22	21	42	31	62	41	82
12	24	22	44	32	64	42	84
13	26	23	46	33	66	43	86
14	28	24	48	34	68	44	88
						45	90

BIBLIOGRAPHY

Braley, William T., Geraldine Konicki, and Catherine Leedy, *Daily Sensorimotor Training Activities.* Freeport, L.I., New York: Education Activities, Inc., 1968.

Chase, Nancy. Bayshore School for Exceptional Children, Lincroft, New Jersey.

Connelly, John. "Bear Pull Design," Bureau of Special Services, Jersey City School District, N.J.

Cratty, Bryant J. *Active Learning: Games to Enhance Academic Abilities.* University of California, Los Angeles: Prentice-Hall, Englewood Cliffs, New Jersey, 1971.

Cratty, Bryant J. *Motor Activity and the Education of Retardates.* Philadelphia, Pa.: Lea and Febiger, 1969.

Cunningham, Susanne A., and Cora Lee Reagan. *Handbook of Visual Perceptual Training.* Springfield, Illinois: Charles C. Thomas Publisher, 1972.

Curry, Genevieve I. *Winterhaven's Perceptual and Training Handbook for First Grade Teachers.* Winter Haven, Florida: Winterhaven Lions.

Doolittle, John H. *Challenge to Change: Program Guidelines in Physical Education for the Mentally Handicapped.* Harrisburg, Pennsylvania: Pennsylvania Department of Education, 1970.

Ekblom, Robert. "Motor Ability Test: Class Record Sheet," Madison Township Public Schools, 1974.

Enderly, David. "Motor Activities," Wanamassa School, Ocean, New Jersey.

Fait, H.F. *Special Physical Education: Adapted, Corrective Developmental.* Philadelphia: W.B. Saunders Co., 1972.

Fleishman, Edwin A. *The Structure and Measurement of Physical Fitness.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1964.

Frankenburg, William K., and Josiah B. Dodds. "Denver Developmental Screening Test." Denver, Colorado: University of Colorado Medical Center, 1968.

Fredericks, H.D. Bud, Victor L. Baldwin, Philip Doughty, and L. James Walter. *The Teaching Research Motor-Development Scale: For Moderately and Severely Retarded Children.* Springfield, Illinois: Charles C. Thomas Publisher, 1972.

Getman, Gerald N. "Lecture: Perceptual-Movement Programming." E.D.A. – A.R.H.P.E.R. Workshop, Philadelphia, Pennsylvania, 1971.

Getman, Gerald N. *Pathway Program 1: Eye-Hand Coordination Exercises.* Boston, Massachusetts: Teaching Resources Corporation, 1968.

Gilliom, Bonnie L. *Basic Movement Education for Children-Rationale and Teaching Units.* Addison-Wesley Publishing Company, 1970.

Guarino, Lawrence A. "Leadup for Throwing." Chancellor Avenue School, District of Newark Public Schools.

Guthorn, Kay. Brielle Elementary School, Brielle, New Jersey.

Hackett, Layne C. *Movement Exploration and Games for Mentally Retarded.* Palo Alto, California: Peek Publications.

Hardisty, Michael J. *Education Through the Games Experiences.* Bellingham, Washington: Educational Designs and Consultants, 1972.

Harris, Jane. "Methods and Practicum Experiences for Teachers of the Handicapped." Graduate course at Monmouth College, West Long Branch, New Jersey, 1974.

Hauselt, Jerry. "Motor Activities," Wanamassa School, Ocean, New Jersey.

Hayden, Frank. *Physical Fitness for the Mentally Retarded.* Ontario, Canada: University of Western Ontario, 1964.

Hilsendager, Donald, Harold K. Jack, and Lester Mann. *Basic Motor Fitness Test for Emotionally Disturbed Children.* National Institute of Mental Health, Grant 1-TI-MH-8543-1, 5. Philadelphia: Temple University, n.d.

Information and Research Utilization Center in Physical Education and Recreation for the Handicapped. "A Guide for Evaluating Motor Development and Physical Performance of the Mentally Retarded." Washington, D.C.: American Alliance for Health, Physical Education and Recreation and U.S. Department of Health Education and Welfare, Office of Education, Bureau of Education for the Handicapped, n.d.

BIBLIOGRAPHY (Continued)

Johnson, L. William. "Objective Test in Basketball for High School Boys." Unpublished Master's Thesis, State University of Iowa, 1934.

Kephart, Newell C. *The Slow Learner in the Classroom.* Columbus, Ohio: Charles E. Merrill Books, Inc., 1960.

Klasen, Edith. *Audio-Visuo Motor Training with Pattern Cards.* Palo Alto, California: Peek Publication, 1969.

Latchaw, Marjorie, and Glen Egstrom. *Human Movement.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969.

Marx, Erich. *The Ball Primary Book for Schools and Clubs.* Germany: Konrad Wiese, 1962. U.S. Distributor: P.E.S.A., Trumbull, Connecticut.

Moran, Joan M., and Leonard H. Kalakian. *Movement Experiences for the Mentally Retarded or Emotionally Disturbed Child.* Minneapolis, Minnesota: Burgess Publishing Company, 1974.

Murphy, Maureen. "Motor Activities for the Blind," St. Joseph's School for the Blind, Jersey City, N.J.

Myers, Patricia I. and Donald D. Hammill. *Methods for Learning Disorders,* New York: John Wiley & Sons, Inc., 1969.

Sherrill, Claudine. "Characteristics of Students Who Need Perceptual-Motor Training." Texas Woman's University at Denton. Goleta, California: Goleta Union School District.

Sinclair, Caroline B. *Movement of the Young Child: Ages Two to Six.* Columbus, Ohio: Charles E. Merrill Publishing Company, 1973.

Vodola, Thomas M. *Descriptive Statistics Made Easy for the Classroom Teacher.* Bloomfield, New Jersey: The C.F. Wood Company, 1974.

Vodola, Thomas M. *Individualized Physical Education Program for the Handicapped Child.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973.

Vodola, Thomas M. "Physical Education for the Handicapped: A Neglected Approach," Chapter 7, in *Handbook on Learning Disabilities,* ed., Robert E. Weber, New Jersey Association for Children with Learning Disabilities. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1974.

Vodola, Thomas M. "The Effects of Participation Time Variations on the Development of Physical Fitness, Motor Skills and Attitudes." Unpublished doctoral dissertation, Temple University, 1970.

West, Fred. "Motor Activities," Ocean Township Elementary School, Township of Ocean School District, Oakhurst, N.J.

INDEX

A.A.H.P.E.R., 72
A.C.T.I.V.E.
  model kit, iii
  services, iii
  supportive research, 1
Answers for Problems, 148-151
Assessment
  criteria, 50
  determining developmental level, 48, 49
  formative information, 1
  objective appraisal, 45
  process information, 43
  product information, 43
  subjective appraisal, 47
  summative information, 1
  variables, 44

Bibliography, 163, 164
Braley, William T., 82

Chase, Nancy, 107
Cratty, Bryant J., 90, 97
Cunningham, Susanne A., 3
Curry, Genevieve I., 3

Definitions
  audio-motor, 104
  balance-postural orientation, 82
  child study team, 1
  diagnostic-prescriptive process, 1
  eye-foot accuracy, 99
  eye-hand coordination, 89
  gross body coordination, 77
  individualized instruction, 4
  learning disability, 4
  low motor ability, 4
  mental retardation, 4
  perceptual-motor, 40
  perceptual-motor problems, 4
  personalized instruction, 4
  T.A.P.E., 76
  visuo-motor, 102

Dodds, Josiah B., 3
Doolittle, John H., 3

Ekblom, Robert, 152
Enderly, David, 99
Evaluation
  motor development, 72-74
  suggested guidelines for, 71-72

Fait, H.F., 16
Fleishman, Edwin A., 37
Frankenburg, William K., 3
Fredericks, H.D., 3, 78

Getman, Gerald N., 3, 4, 40, 89
Gilliom, Bonnie L., 80
Godfrey, Barbara, 10
Guarino, Lawrence A., 89
Guthorn, Kay, 107

Hackett, Layne C., 93
Hammill, Donald D., 4
Hardisty, Michael J., 92
Harris, Jane, 107
Hauselt, Jerry, 88
Hayden, Frank, 1
Hilsendager, Donald, 16, 37

Individualized Instruction
  definition of, 4

Jack, Harold K., 16
Johnson, L. William, 35

Kalakian, Leonard H., 4
Kephart, Newell C., 3, 10
Klasen, Edith, 3

Learning Disabled
  characteristics, 146, 147
  definition, 4
  diagnostic forms, 2
  learning theory, 2
  task/activity criteria, 3, 4
Low Motor Ability
  definition of, 4

Mann, Lester, 16
Marx, Erich, 91
Moran, Jean M., 4
Motor Ability
  basic motor ability composite
    score sheet, 128
  basic motor ability screening
    test, 16-23
  basic motor pattern checklist
    (group), 10, 11
  basic motor pattern checklist
    (individual), 10, 12-16
  basic movement performance
    profile composite score sheet, 129
  basic movement performance
    profile, 24-30
  flow chart, 110-114
  instruments/population, 7
  motor ability test, ages 5-7, 31-36
  motor ability test, ages 8-11, 37
    composite score sheet, 131
  pre-k screening test/form, 8, 9
Murphy, Maureen, 80, 86
Myers, Patricia I., 4

Norms
  motor, grades 3-6, 159-162
  motor, kindergarten, 46
  motor, New Jersey, 132-134

Organization/Administration
  participation card, 70
  sample lesson plan, 68
  supply/equipment needs, 123
  teacher-pupil ratio, 68, 69
  teaching station, 68, 69

INDEX (Continued)

Parental Reporting, 74, 75
Perceptual-motor
  definition, 40
  flow chart, 115-120
  screening instrument, 38, 40-42
  summary, 64
Personalized Instruction
  definition of, 4
Prescription
  perceptual-motor, 62-64
  priority needs, 51
  variables, 52
Prescriptive Activities
  audio-motor, 62-64
  balance-postural orientation, 82
  complex perceptual-motor, 107
  eye-foot accuracy, 99
  eye-hand accuracy, 95
  eye-hand coordination, 89
  gross body coordination, 77
  visuo-motor, 102
Program implementation, 64
  summer program, 153, 154

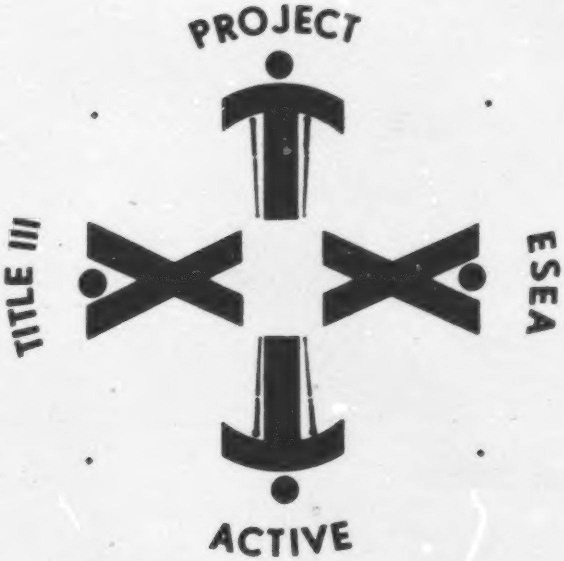
Raw Score Tally Sheet, 145
Reagan, Cora Lee, 3

Sherrill, Claudine, 146
Student
  behavioral objectives, 4
  certificate of merit, 4, 121
  learning experiences, 65-68
Supply and Equipment, 123-127
  tapered beam specifications, 130

Table of Numbers, 135-144
Task Analysis, 57-61
Teacher
  behavioral objectives, 5
  certificate of achievement, 5, 122
  learning experiences, 54, 55
  role of, 64
Time Prescriptions
  procedure for submitting raw
    scores, 155-158

Vodola, Thomas M., 40, 45, 50, 51

West, Fred, 98


PROJECT
TITLE III
ESEA
ACTIVE